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Contemporary
Historical
Examination of
Current
Operations
REPORT

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AIR OPERATIONS IN NORTHERN LAOS

1 NOVEMBER 1969 - 1 APRIL 1970 (U)

5 MAY 1970

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CHECO Division

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PROJECT CHECO REPORTS

The counterinsurgency and unconventional warfare environment of Southeast Asia has resulted in the employment of USAF airpower to meet a multitude of requirements. The varied applications of airpower have involved the full spectrum of USAF aerospace vehicles, support equipment, and manpower. As a result, there has been an accumulation of operational data and experiences that, as a priority, must be collected, documented, and analyzed as to current and future impact upon USAF policies, concepts, and doctrine.

Fortunately, the value of collecting and documenting our SEA experiences was recognized at an early date. In 1962, Hq USAF directed CINCPACAF to establish an activity that would be primarily responsive to Air Staff requirements and direction, and would provide timely and analytical studies of USAF combat operations in SEA.

Project CHECO, an acronym for Contemporary Historical Examination of Current Operations, was established to meet this Air Staff requirement. Managed by Hq PACAF, with elements at Hq 7AF and 7AF/13AF, Project CHECO provides a scholarly, "on-going" historical examination, documentation, and reporting on USAF policies, concepts, and doctrine in PACOM. This CHECO report is part of the overall documentation and examination which is being accomplished. Along with the other CHECO publications, this is an authentic source for an assessment of the effectiveness of USAF airpower in PACOM.



MILTON B. ADAMS, Major General, USAF
Chief of Staff

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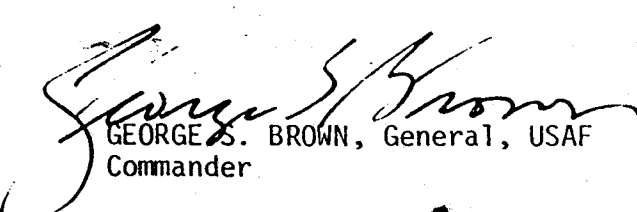
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PREFACE

This CHECO report, like its predecessor, is a continuing case study of a unique use of tactical air power in support of guerrilla forces in northern Laos. The problems of targeting, command and control, operations during poor weather, and force allocation, and the lessons learned, have relevance for future operations.

This report covers a period during which air power was able to sustain a small group of Meo guerrillas within the shadow of the North Vietnam border, under mounting pressure from regular enemy forces. Although the air operations were constantly restricted by poor weather that limited reconnaissance and attacks to six hours or less per day, the net result of the combined tactical air and friendly guerrilla operations was a three and a half month delay of the enemy's dry season offensive.

The enemy had lost the Plain of Jars at high cost, and he reoccupied it at high cost. The cost would have been even higher had the guerrilla forces stood and fought in a delaying action thus forcing the enemy to mass and present targets for air attack. The enemy recovered a depopulated PDJ devoid of crops and supply caches and he owned it only at night and during bad weather. His situation in April 1970 was markedly different and worse than in June 1969 when he last held the same territory.


GEORGE S. BROWN, General, USAF
Commander

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Long Tieng, Headquarters of Military
Region II in Laos and Capital of Xieng
Khouang Province.

FIGURE 1

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CHAPTER I

OVERVIEW

During the 1969-1970 dry season in Northern Laos, airpower played a critical role in supporting friendly guerrilla forces fighting defensively against two North Vietnamese divisions using tanks and artillery. Prior to November 1969, U.S.-backed Meo guerrilla forces led by Maj. Gen. Vang Pao and supported by a record 200 USAF sorties a day had pushed across the Plain of Jars, captured 8,000 tons of enemy equipment, killed several thousand enemy soldiers, and reached advanced positions only a few miles from the border of North Vietnam.^{1/} Considered the greatest Lao victory of the war, this success was clearly attributed to airpower used to advantage to support outnumbered and outgunned friendly guerrillas. It was recognized at the time that the guerrillas could not hold their gains against an inevitable dry season enemy offensive, but it was hoped that this enemy reaction could be delayed. The enemy had been caught off balance, losing his pre-stocked caches in the Plain of Jars area, as well as a population base which could hide him, carry his supplies, dig his trenches and bunkers, and provide him with food.

A high sortie rate, averaging 150 a day in November and December 1969, and January 1970, supported Vang Pao's advanced troops and struck interdiction points primarily on Route 7, leading from North Vietnam to the heartland of Laos. In all, the combination of USAF airpower and Vang Pao's ground forces managed to hold the enemy back for a critical three and one-half months after the start of the dry season.

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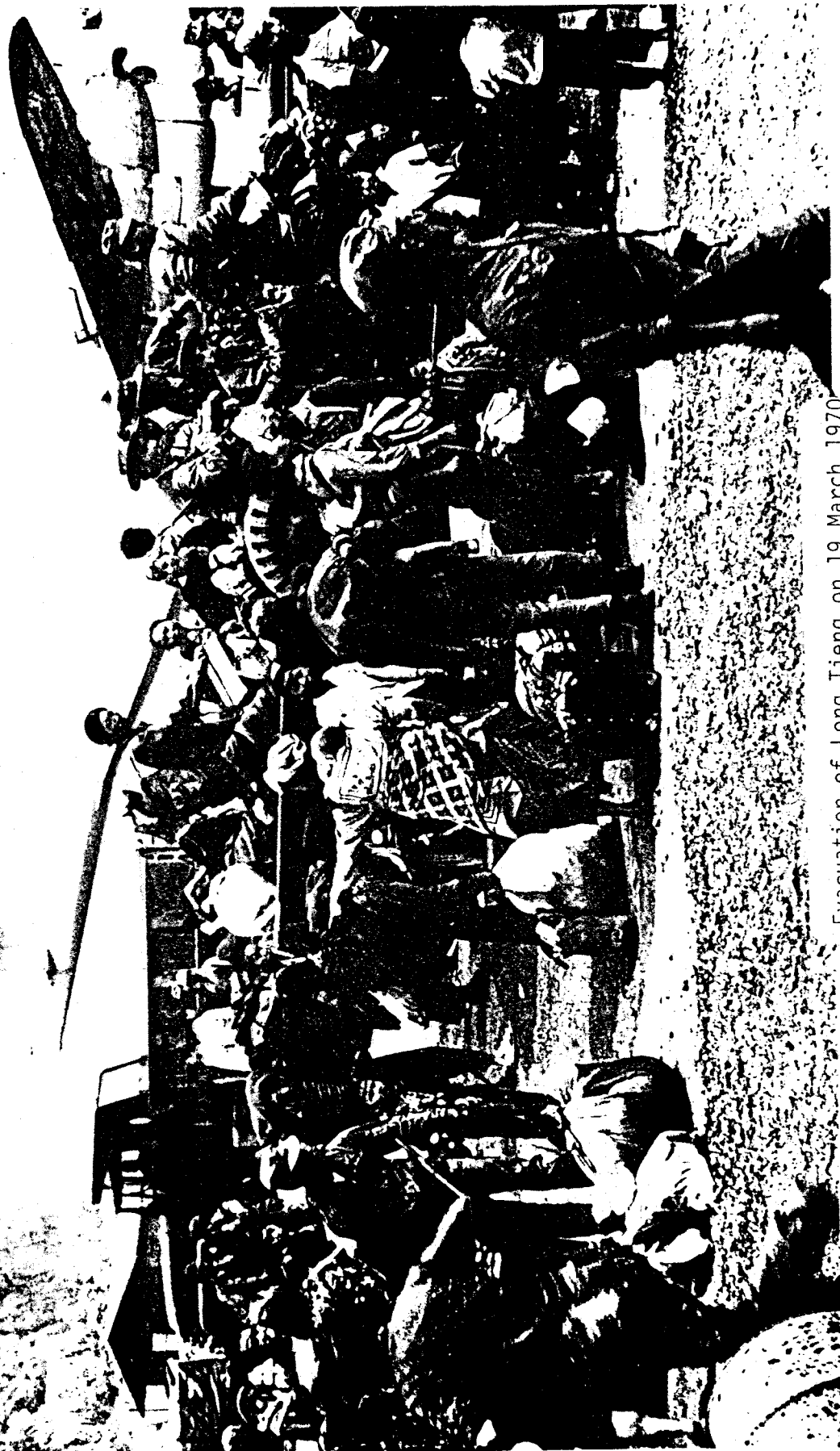
As the roads dried out, as Vang Pao's troops began to tire from five months on the front line, and as one of the worst ground hazes in memory restricted visibility over all of northern Laos, the enemy attempted to move. His first attacks in December 1969 and early January 1970 were beaten back.

On 12 January, after four days of bad weather, the enemy took Phou Nok Kok, a key northeast entry point to the Plain of Jars on Route 7, where more than 250 of Vang Pao's guerrillas straddled the road. Phou Nok Kok was called "the cork in the bottle" of the plain. More than a month later, on 21 February, Xieng Khouang, the main airfield of the PDJ with a supply base and some 1,300 troops, was finally taken as its troops deserted without a fight. Muong Soui, west of the Plain, with its airstrip serving 11 Royal Lao Air Force T-28s, was lost on the night of 24 February 1970, when its 120 defenders also fled without fighting. There followed three weeks of relative quiet, during which the USAF sortie rate dropped from 200 daily to less than 100 a day due to lack of targets. Then, on 17 March, the enemy hit the "Vang Pao Line" south of the PDJ, consisting of five strong points manned by 3,000 friendly guerrillas, appearing in strength all around Sam Thong and Vang Pao's headquarters base of Long Tieng.

Sam Thong was evacuated, and on 17 March 1970, it looked as if Long Tieng would also be lost, but in a critical four-day period, with airstrikes during extremely poor visibility, reinforcements (including more Thai troops) were brought into Long Tieng, and the key headquarters site held. By the end of March, the enemy appeared to have reached his high water mark, and Vang Pao, aided by improved weather conditions for air support, was able to mount a limited offensive.



Captured enemy field guns in Plain
of Jars, October 1969.
FIGURE 2



Evacuation of Long Tieng on 19 March 1970
FIGURE 3

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While the loss of the PDJ was expected and air plans made accordingly, the final rapid enemy advance, the crumbling of friendly defenses, and the fact that the North Vietnamese had moved deep into Laos created a dangerous situation: "It was a serious loss, psychologically, politically, and militarily," said U.S. Ambassador to Laos, G. McMurtrie Godley.^{2/}

The events leading to the situation which existed in early 1970 are documented in this CHECO report with emphasis upon the role of USAF air support, the key element of power for friendly forces. This report is a sequel to a series of earlier reports covering the air war in Laos since May 1964, when enemy occupation of the Plain of Jars triggered a minimal USAF air effort. A previous report, covering the period from July 1968 through November 1969, outlined the employment of airpower in support of a guerrilla ground force on the offensive. The present report analyzes the role of air in support of guerrillas in a defensive situation for which the guerrillas were not trained or psychologically suited.

Four major elements which influenced the role of airpower during the enemy advances in the 1969-1970 dry season are emphasized in this report. First is the relationship of highly sophisticated tactical airpower to irregular ground troops fighting against regular forces. Second is the extremely complex and relatively clandestine control mechanism by which U.S. airpower was directed. Third are intelligence and targeting problems in an environment very favorable to enemy forces. Finally, there are the adverse weather conditions in Northern Laos during the 1969-1970 dry season, when a haze created by smoke and dust completely covered the combat area for long and critical periods.

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Air War in Northern Laos

The war in Northern Laos (BARREL ROLL) was supported by USAF jet and prop aircraft, Royal Lao Air Force (RLAF) T-28s and gunships, and Controlled American Source (CAS)-contracted aircraft from Air America and Continental Air Services. The Thailand-based jet strike planes, F-105s and F-4s from Udorn, Korat, Takhli, and Ubon, Thailand, were only a short distance from the combat area. Fifty-eight A-1 prop aircraft were available from Nakhon Phanom, also relatively close to the contested area of Military Region II. Strikes by these aircraft were controlled by 21 Raven FACs based in Laos and flying O-1, T-28, and U-17 aircraft, F-4 jet FACs from Korat and Udorn, and a few OV-10 FACs from Nakhon Phanom, and later Udorn. The RLAF had approximately 60 T-28s in operational status on any given day, including those T-28s used by Detachment 1, 56th Special Operations Wing (SOW), based at Udorn, and flown by Thai, Lao, and USAF pilots. Also committed to the air effort in Northern Laos were three AC-47 gunships assigned to the 432d Tactical Reconnaissance Wing (TRW) at Udorn and eight (seven operational), belonging to the RLAF. In February 1970, the first two aircraft of a detachment of OV-10s with visual reconnaissance (VR) as their primary mission, arrived in Udorn as did four AC-119K gunships. Nearly all of the airlift for the ground forces was supplied by USAF and CAS-contracted aircraft.

Command and Control in BARREL ROLL

The complexity of control in the Northern Laos operation was described in the previous CHECO report on this subject.^{3/} The control problem was even more clearly delineated during the early 1970 dry season fighting. The U.S. Ambassador to Laos was charged with overall direction of the war effort. The primary military force at his disposal--tactical air--was controlled by COMUSMACV

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through his Deputy COMUSMACV for Air, the Commander, Seventh Air Force, in Vietnam. The air control structure in Laos was under the direction of the U.S. Air Attache in Vientiane, Laos, including control of the Raven FACs. The Deputy Commander, 7AF/13AF, was the 7AF manager at Udorn, working directly with CAS, the Air Attache, and the Ambassador in matters of targeting and employment of air resources.

Gen. George S. Brown, Commander, 7AF, whose air operations in RVN and in the STEEL TIGER area were controlled under tight and experience-tested procedures, was concerned about the command and control arrangements in BARREL ROLL. He said:^{4/}

"...Command and control in BARREL ROLL is weak. The Ravens are our best FACs but they don't give a damn about paperwork and reporting, and we don't always know what's happening with our strikes. Sometimes they're using them on targets remote from the main action where they're needed. The nuts and bolts of command and control are the same in BARREL ROLL as in the rest of the theater. But it's not as tight there. In STEEL TIGER, we know what's there and what it's doing, and operations are coordinated and carefully watched. That's not the case in BARREL ROLL...."

The problems created by multiplicity of command were resolved to some extent by weekly "BARREL ROLL Working Group" meetings at which all U.S. agencies involved in the conflict met to improve operational procedures. Also, direct contact by the 7AF and 7AF/13AF Commanders with the Ambassador and CAS helped to iron out some of the major difficulties. There still remained some thorny obstacles to the employment of the available air capability in Southeast Asia. Very important, as pointed out by General Brown, was communication with the

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Raven FACs, who directed the bulk of the airstrikes in support of Vang Pao and who were the USAF personnel most cognizant of the ground situation, since they were in daily contact with CAS and Vang Pao.

The Ravens were located at five sites in Laos (Long Tieng, Vientiane, Luang Prabang, Savannakhet, and Pakse), with more than half at Vang Pao's Long Tieng headquarters before the enemy attacked it in March. Also at each site was an Air Operations Center Commander, who was assigned to the Air Attache and in charge of the FACs at that location. A senior Raven FAC was based at Vientiane and also assigned to the Air Attache.

The Ravens in their advanced locations quickly came under the influence of CAS and Vang Pao, despite their USAF orientation prior to assignment. This fairly loose arrangement was an outgrowth of the clandestine U.S. role in Laos, which did not permit a more direct control structure such as existed in Vietnam, with FACs and fighters under one central USAF control. This arrangement created a formidable problem of control. USAF FACs were flying secretly from Laos, under control of the Air Attache for a Meo ground commander advised by the CIA, to direct strikes by USAF planes based in Thailand under control of a command center in Vietnam.^{5/} Although the system worked, 7AF and 7AF/13AF held serious reservations about its effectiveness. Efforts were made to correct this situation and simplify the command structure, but lacking an overt U.S. role in Laos, corrective action was difficult.^{6/}

The Air Attache office in Vientiane was also concerned about the command arrangements in Laos, particularly the fact that it was not a major part of the command and control structure. One AIRA Officer said, "If AIRA was functioning

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as it should, there would not have to be any direct links between the Ambassador and 7AF/13AF."^{7/} There was good rapport between the Ambassador and the Deputy Commander, 7AF/13AF, Maj. Gen. Robert L. Petit, and the Ambassador relied heavily on his judgment in matters of air support in BARREL ROLL.^{8/}

Not only did the control mechanism for fighting the war in Northern Laos have some limitations, the strategy for the overall effort was also tenuous. As discussed in the previous CHECO report on Laos, there were many political restraints which governed U.S. policy and action in Laos. The adverse reaction in the U.S. to the 18 February 1970 B-52 strike in the BARREL ROLL area reflected the political sensitivity to U.S. military action. There were several other anomalies: the extensive Chinese road-building effort in northwestern Laos was free from U.S. air attacks, a no-strike Buffer Zone existed along the NVN Border where enemy troops rested and regrouped, and the number of U.S. military personnel permitted in the country was strictly controlled.

A bright spot in the command and control area was the centralized control of airpower and the relative ease with which its application could be shifted. As explained by the Commander, U.S. Military Assistance Command, Vietnam,^{9/} Gen. Creighton W. Abrams, Jr.:

"...Fortunately, we've had centralized management of the air effort and this has been important to me personally. While air is powerful, it is also flexible. From my level, this power can be moved with ease. Our area includes BARREL ROLL, STEEL TIGER, and South Vietnam. Where the enemy puts the heat on, whether it's the Plain of Jars or Duc Lap, it's only a matter of hours until tremendous shifts of power can be made....The centralized control of the application of power is an important feature and a critical one for efficient use of airpower...."

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Allocation of Sorties in Laos

There were other factors which had an influence upon the role of air support to Lao ground forces during the 1970 dry season enemy offensive. For example, the enemy advance came at a time when the overall U.S. effort in South-east Asia was contracting. U.S. troops were being withdrawn from the Republic of Vietnam as the Vietnamese took on more of the fighting, but of greater relevance to the war in Laos was the reduction in the overall air effort. The total available tactical air sorties in SEA dropped substantially in late 1969. B-52 sorties were cut from 1,800 to 1,400 monthly, and this meant that tactical air had to fill the gaps. The emphasis on economy affected the BARREL ROLL effort in other ways. For example, the use of sensors on Route 7 was discontinued shortly after the Phou Nok Kok attack because the Bat Cat aircraft orbit required for sensor read-out was curtailed.^{10/} The decision as to where available sorties would go rested with the Commander, U.S. Military Assistance Command, Vietnam, Gen. Creighton W. Abrams, Jr., working through his Deputy COMUSMACV for Air, Gen. George S. Brown. General Abrams was sensitive to the need for air support in BARREL ROLL, particularly to the danger that a major setback in Laos might bring a political decision to withdraw Royal Lao Government consent to the U.S. air effort in STEEL TIGER.^{11/} However, the war in RVN and the interdiction effort in the eastern panhandle had a greater priority for the 425 to 475 total daily out-country sorties.

In November and December 1969 and January 1970, following Vang Pao's move across the Plain of Jars, the USAF was flying about 115 sorties a day in BARREL ROLL, both in close air support and on interdiction missions mainly against

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**BARREL ROLL STRIKE SORTIES
NOV 1969 THROUGH MARCH 1970**

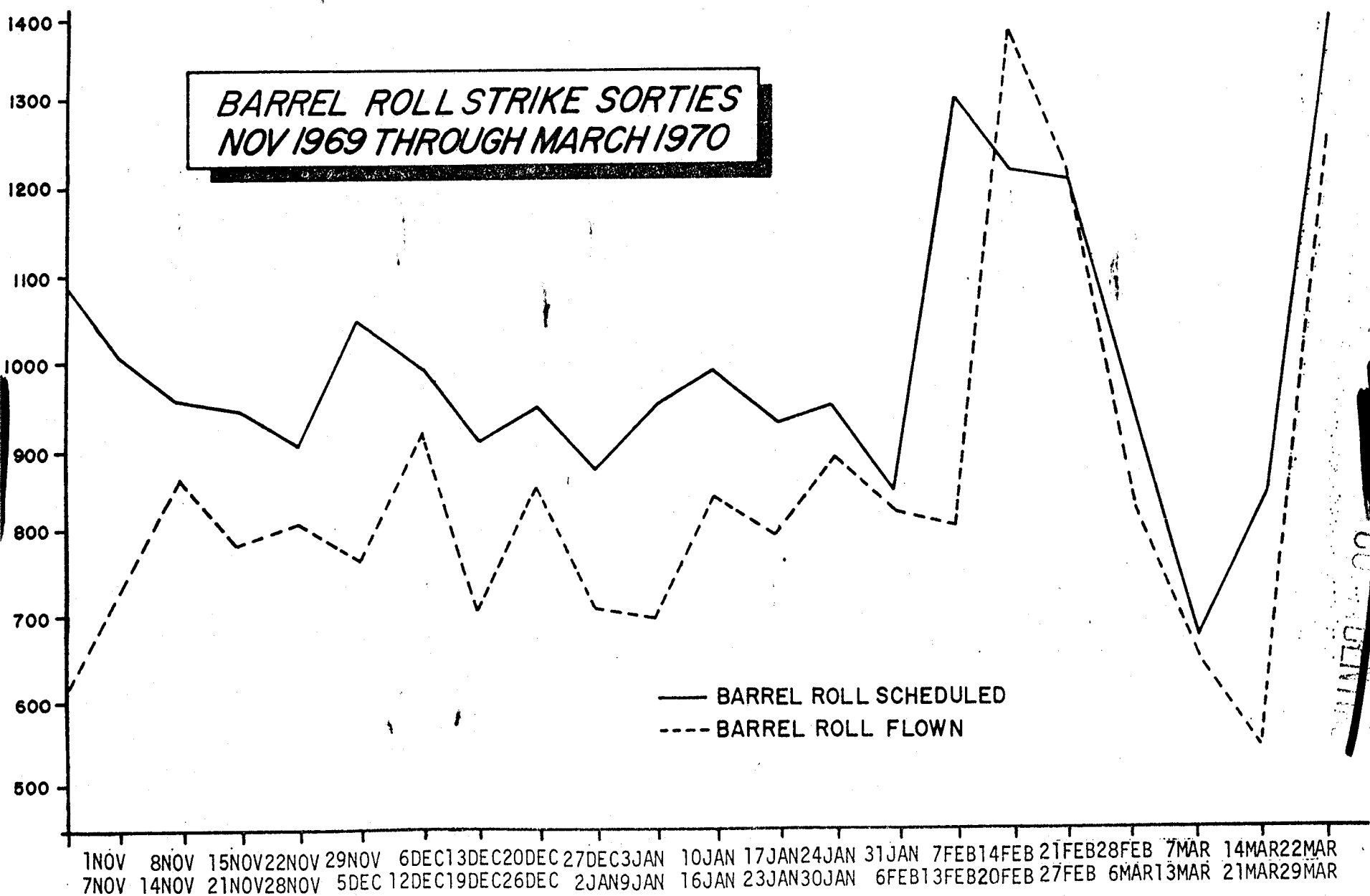


FIGURE 4

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Route 7, the key entry point to the PDJ. This sortie rate increased to 152 daily in February. The lack of targets in early March brought the sortie rate sharply downward to a low of 73 on 16 March, but with the enemy move against Long Tieng, the sortie rate again rose, reaching 200 at the end of March 1970.^{12/} This fluctuation shows how the centralized control of air operations in South-east Asia permitted the air effort to be shifted within hours to any area requiring increased support on a priority basis. As General Brown had indicated, "It would only take a telephone call to raise the allocation."^{13/}

Targeting in BARREL ROLL

Even for those sorties provided to the BARREL ROLL area, a decision had to be made on their allocation to interdiction, close support to guerrillas, or strikes against enemy storage areas or headquarters and troop concentrations. CAS, which ran the ground war in MR II, wanted emphasis placed on support of the guerrillas. The CAS viewpoint was bluntly stated by one of its Senior Officials in Vientiane:^{14/}

"...Interdiction by air is not effective. You can only interdict a road for a very short period of time. And it's only effective during the rainy season. The antipersonnel mines and the MK-36 can be neutralized by the enemy, using electrical techniques, or vehicles, or cattle, or even rolling barrels down a road with a bamboo stick between them. They have many ways to get through...."

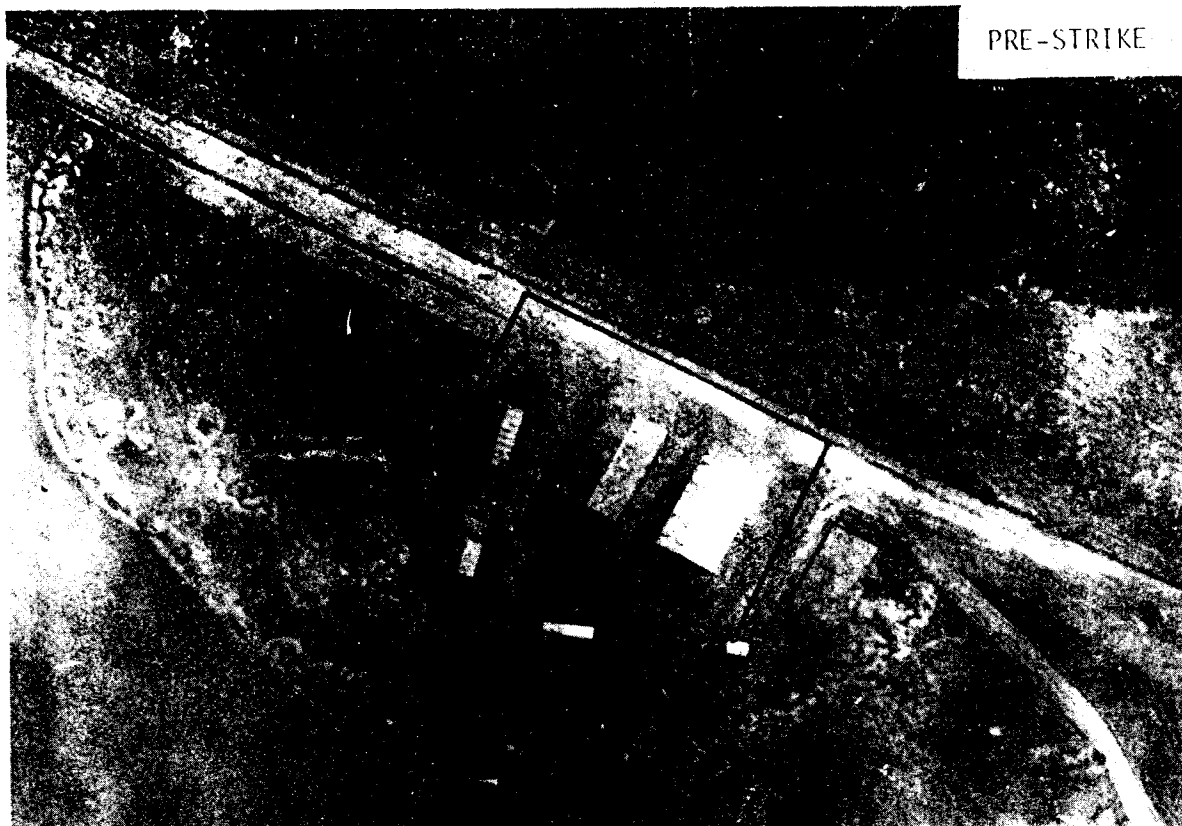
The Air Attache at Vientiane, Laos, and Hq 7AF/13AF at Udorn, Thailand, recognized the importance of close air support to troops in contact (TIC), but also wanted the air effort shifted to interdiction and logistics targets when TICs were reduced. Prior to December 1969, when the roads began drying out and

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when enemy activity dropped, the main air effort was on TIC support and interdiction. Around mid-December, emphasis was shifted to logistics targets-- storage areas, headquarters areas, and troop concentrations. This shift forced the enemy to disperse and delay his offensive.^{15/} In January 1970, as the weather deteriorated and as enemy dispersal made targets difficult to find, the effort was shifted to areas which could be hit under all-weather conditions. After an extensive buildup protected by poor weather conditions, the enemy's move in February extended his lines of communications. The emphasis then went back to interdiction.

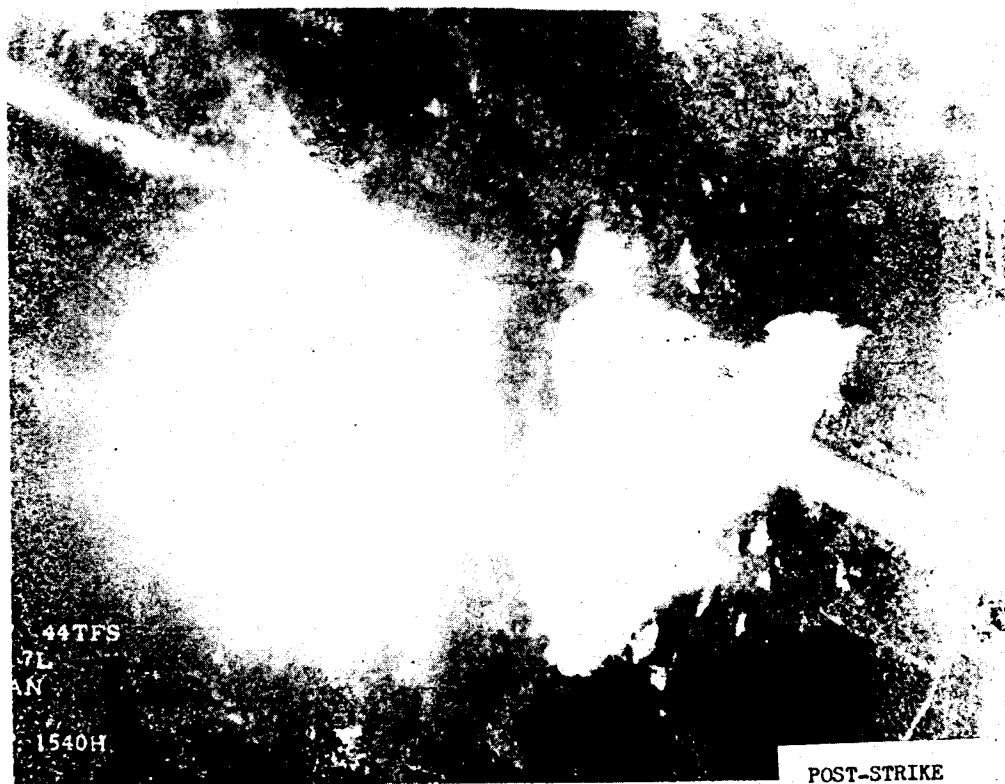
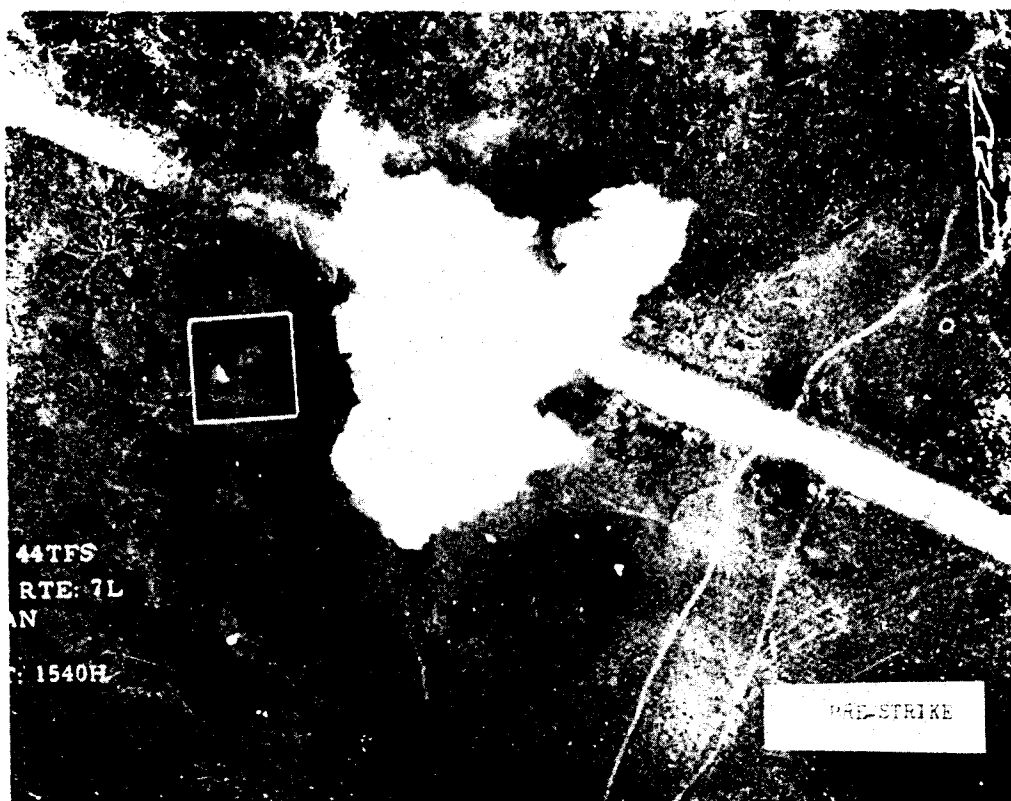
To insure that he would have a firsthand hearing of the BARREL ROLL needs, General Brown visited with CAS and the U.S. Ambassador to Laos, who leaned toward the CAS viewpoint.^{16/} The result was an allocation of sorties to the Raven FACs when the situation called for close air support and a switch to other targets when the ground situation eased. The flexibility with which sorties could be diverted from other targets to close air support was frequently demonstrated, a prime example being Long Tieng in March.

The discussion concerning interdiction versus close air support stemmed from questions about the reliability of CAS intelligence and USAF targeting. CAS had admitted that during the Vang Pao offensive in 1969, its Forward Air Guides (FAGs) had grossly inflated their reports of enemy killed by air in the mistaken belief that even greater air support would result. While action was taken to improve FAG reporting, there were continuing doubts in 7AF and 7AF/13AF about the precision of CAS intelligence estimates of enemy strength, both generally and in particular areas. Seventh Air Force was interested in attacking enemy



Air attack against Lima Site 22 after
enemy capture on 21 February 1970.

FIGURE 5




Tactical Airstrike .8 NM west of Ban
Ban on 1 March 1970 at 1540 hours.
FIGURE 6



"STRIKE PHOTO"
ROAD CONDITION RTE 7L
6.3 NM WEST BAN BAN
MSN 1433 W-02-B6861
16 FEB 70 APRX TOT: 1720H
13654N1032707E
8927

Interdiction of Route 7L, six miles
west of Ban Ban on 16 February 1970.
FIGURE 7



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troops but it could not get detailed information from CAS required for air-strikes. The problem was pointed out by Col. Eugene Sonnenberg, Director of Operations for Hq 7AF/13AF: ^{17/}

"...No one seems to know where the enemy attacks will come from. Every time I ask for information on where the enemy is coming from during his attacks, the reply seems to be 'We don't know.' We want this information for all weather targeting, but we can't seem to get it."

The situation was different in RVN, General Brown said, where the Army would provide the targets and then ask for the sorties to hit them. This was not the case in BARREL ROLL. General Brown added: ^{18/}

"...They don't talk in terms of targets up there, only in round numbers of sorties required. And we get no expression of where those sorties will be used....There is a number beyond which you don't gain much with more air effort. That depends on the targets and whether our strike planes can be controlled or not controlled. The Raven FACs can handle only so many...."

Further, General Brown believed strongly that when the situation was fluid and friendly ground units did not force the enemy to bunch up, close air support targets for tactical air did not exist. It was frustrating for the Air Force during enemy attacks in January and February 1970 to have an air capability available and not be able to use it against enemy troops attacking or threatening friendly positions. In fact, many of the strikes allocated to the Ravens for close air support were employed far from the immediate contact area, sometimes outside of MR II. Under these conditions, continuing high allocation of sorties to the Ravens could not be justified, and 7AF shifted sorties to

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interdiction of Route 7 and the STEEL TIGER area. Even during the critical period of the battle in March 1970, when the enemy was threatening Long Tieng, Ambassador Godley admitted he could not use more than the 100 sorties daily he was getting because of the problem of finding targets. ^{19/}

The difficulty in locating the enemy on the offensive was partly due to the reduced CAS-Vang Pao intelligence network. The continual contraction of Vang Pao's area of intelligence since early 1968, particularly the complete evacuation of the Plain of Jars early in the year, meant a serious loss of an important intelligence base. CAS employed intelligence teams of one or two men located in villages where the enemy operated, and these men, covering as villagers, radioed back information on enemy movements. When the villages were evacuated, so was the intelligence source. Vang Pao also had his people scattered throughout the PDJ area in tiny villages and farms, who provided him information, and this source, too, dried up considerably following the pullback. CAS Road Watch Teams continued active, as did their 20-man action teams which were assigned specific destructive missions. However, these teams were only a part of the overall intelligence network whose efficiency was reduced when Vang Pao was fighting for his rear headquarters.

Another major problem in finding the enemy stemmed from the measures he took to avoid detection by visual reconnaissance. After his thrust across the PDJ, the enemy avoided the open plain by day, dispersing his supplies in small caches scattered along the line of movement over wide areas. He moved in small elements, usually at night, emerging to fight only when the weather and terrain conditions were to his advantage. This was especially true at Phou Nok Kok



Evacuees at Muong Soui on 22
February 1970.

FIGURE 8

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where the enemy struck after four days of bad weather, overran the friendly positions, then retired.^{20/}

According to CAS, part of the difficulty in finding the enemy was the relative unfamiliarity of the newly assigned USAF Raven FACs with the terrain in Laos. A Senior CAS Official who had considerable experience in the Congo, where the jungle was considerably thicker,^{21/} made these comments:

"...It takes more than a year to really learn about an area. In big game hunting, you're not effective until you learn from experience where the animals move, where they get their water, and what their habits are. It's the same thing here when our Ravens try to find the enemy. By the time one of them gets to understand the enemy and his terrain, he's ready to go home."

The major problem, however, was weather. (App. II) Between February and April 1970, there was a ground haze throughout much of Southeast Asia, including MR II, which was caused by a mixture of ground fog and burning fields. For weeks on end, it was almost impossible to see the ground, as was the case when the enemy was closing in on Long Tieng. There was evidence that the enemy was deliberately starting fires over a large area to further reduce visibility. Not only did this reduced visibility affect the FACs on visual recon, but it also hampered the strike effort. Through much of this period, visual bombing was possible only for a maximum of five or six hours a day, and there were some days in early March when the Lao-based T-28s used in close support could not even take off. Fortunately, weather conditions cleared for a few days in late March during the enemy siege of Long Tieng.

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Further, in preparing for his assault on the PDJ in January 1970, the enemy had an exceptional advantage in weather conditions in the eastern MR II area. The northeast monsoon rain and clouds which covered most of North Vietnam spilled over to the eastern fringes of the Annamite Mountains where the enemy had his main support bases. This weather gave him a protective cover and reduced the impact of airstrikes directed against his preparations for the attack. ^{22/}

When the action became heavy, the Ravens were often too committed to the task of putting in strikes to carry out sufficient visual reconnaissance. To correct this, two OV-10s were sent to Udorn in February to provide additional VR coverage in BARREL ROLL. By being briefed and debriefed by the 7AF/13AF DI staff, the OV-10s enhanced the intelligence gathering activity. The jet FACs (Tiger and Laredo) were also able to provide coverage and strike direction beyond that of the slower O-1s. Their ability to cover more territory and direct strikes in marginal weather made them very valuable to the BARREL ROLL effort, particularly as the Ravens could not always handle all the strikes assigned to them. Another means of countering the weather problem was the use of radar bombing and emplacement of line of communications (LOC) packages along Route 7, although lack of a means of damage assessment made it difficult to determine with rapid precision the effect of these efforts.

Ground War in Northern Laos

In the normal pattern of ground operations in Northern Laos, friendly forces made their greatest advances in the wet months (June through October) when the enemy roads and trails were inundated and more easily interdicted by air. Close air support could be provided in relatively large strength to

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Vang Pao's Special Guerrilla Units (SGUs) because of reduced requirements for airstrikes on the Ho Chi Minh Trail. When the roads dried out, starting in November, the enemy assumed the offensive at a time when requirements for air sorties in the southeastern Laos trail network were high and when those close air support sorties available to Vang Pao were restricted by extremely poor visibility. In Vang Pao's 1969 wet season offensive, he reached far beyond his original objectives. Determined to reach his birthplace of Nong Het, only five miles from the NVN Border, he moved to within ten miles of it.^{23/} This move was a vulnerable extension of his limited forces, and it had the side effect of limiting air interdiction to the short distance between his advanced defensive positions and the NVN Border. The combination of ground forces near the NVN Border and a high level of air sorties, however, worked to delay appreciably the enemy's usual dry season offensive.

For Vang Pao's ground forces, the primary element of power was in the air. Vastly inferior in numbers, weapons, and experience to the estimated 16,000 North Vietnamese in Northern Laos, the mobile guerrilla force, ranging from 3,000 to 6,000 men, could not fight effectively without air support and in most cases, would not. Air was their mobility, their artillery, their static defense, their reconnaissance; and the heavy firepower to be delivered on their enemy was, they hoped, a deterrent to enemy attacks. A Senior CAS Official in Vientiane, Laos, described Vang Pao's attitude toward air:^{24/}

"...Vang Pao looks upon air as a magic wand. All he has to say is kill the enemy here and it's done. This worked when he was on the offensive. Then they thought the same way of air on the defense and they expected

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air to defend them. When it didn't, they got scared and ran...."

Vang Pao's forces had been trained by CAS for an offensive role, and the defense of villages and main camps was left to self-defense guerrillas, numbering 10,000 mainly young boys and old men. In January 1970, a number of the guerrillas had been on the line for more than four months, usually on hill-tops, where they were harassed by enemy mortars, rockets, and sappers. The guerrillas were mainly supplied by airdrops. They were tired, lonely, and their morale was low. Nearly all of the time, poor weather and low visibility restricted the daily working of tactical aircraft to less than five hours, usually during the afternoon. Whenever this occurred, the morale of the guerrillas dropped even lower. This discouragement was particularly true at Phou Nok Kok and in most of the holding points of the dry season defense line which fell after protracted enemy attack.

Vang Pao's Meos had been carrying the brunt of the war in Northern Laos for more than eight years and, according to former Ambassador William Sullivan, ^{25/} had lost almost a complete generation of fighting men. To keep a force in the field, boys of 14 and 15 were recruited, and these were often pitted, after only a few weeks of training, against regular units of the NVA's 312th and 316th Divisions. ^{26/} Further, after years of fighting, with minimum support from regular Lao army units, the Meos had little to show for their losses. In early 1968, their forces were operating in the northernmost part of Laos, but by March 1970, they were pushed back to their stronghold at Long Tieng, south of the Plain of Jars. ^{27/} His mood over the years ranging from despair to euphoria, depending upon his success, Vang Pao, on one occasion in July 1969,

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had threatened to move his 200,000 Meo tribesmen to Thailand. In November of that same year, he reportedly made secret contact with the Communist Chief of Sam Neua Province to the north, offering to stop hostilities in return for a guarantee that his Meo nation could retain Xieng Khouang Province.^{28/} In early March 1970, after his forces were swept off the Plain of Jars, the tough general proposed to CAS that he take the offensive right into the main enemy stronghold of Ban Ban, east of the PDJ. The fluctuating morale of the Meos and their leader, as well as their changing moods, made the CAS task of advising a difficult one. A Senior CAS Official remarked on this subject, "We don't run Vang Pao. We advise him. And he doesn't always follow our advice."

The case in point was a plan given to Vang Pao in January 1970 which called for a fighting withdrawal under air cover to four successive lines, which the general did not follow. According to a CAS Official:^{29/}

"The idea of a phased withdrawal was alien to him. We mistakenly thought we could teach him defensive tactics overnight. Vang Pao was fully briefed on the withdrawal plan but it wasn't followed. As a result, we didn't inflict as much damage as air is capable of."

The inability of Vang Pao's ground forces to exploit airpower fully when on the defensive was a source of bitter frustration to air commanders prepared to provide all the sorties required. In Xieng Khouang Province, particularly, where an average of 200 sorties daily were provided for three days prior to the attack and where the weather was clear, the 1,300 friendlies put up practically no resistance and deserted their positions. General Brown was concerned about this failure of ground forces to resist and force the enemy to mass, thereby creating targets for airstrikes. Maj. Gen. Robert L. Petit, Deputy Commander,

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7AF/13AF, said: "I don't see how we can help them defend themselves if they don't stand and fight."^{30/} The U.S. Ambassador to Laos, G. McMurtrie Godley, also held the opinion that air could have done no more than it did when the ground defenders lacked battle discipline.^{31/}

The failure to stand and fight was considered by some U.S. officials as a necessary part of Vang Pao's overall strategy to conserve his most scarce and precious commodity: manpower. However, it was not U.S. Embassy policy to try to hold the PDJ; it was Vang Pao's decision, urged on him by Prime Minister Souvanna Phouma and King Savang Vathana in the euphoric period following recapture of the Plain of Jars in late 1969.^{32/} The adoption of this decision to hold the PDJ was responsible for the Meo General's problems in carrying out the phased withdrawal, which would have punished the enemy more heavily with air-strikes, as occurred around Long Tieng in late March. Although Vang Pao was not a general who could fight on conventional lines, his Meo fighters, withdrawing at random in territory they knew well, did manage to get back to their units, and friendly losses were light. CAS, while disappointed that the withdrawal was not by plan, credited airpower with allowing Vang Pao to hold as long as he did, particularly at Phou Nok Kok, where the enemy lost more than 600 men to air before the friendlies withdrew.^{33/} However, Phou Nok Kok was the exception and not the rule in the fighting until the determined friendly stand at Long Tieng in late March 1970.

As long as the enemy continued his attacks during the dry season months, Vang Pao's forces could hardly emerge from a defensive posture. There were hopes, however, that if he could be sustained by air support until the rains



Lima Site 22 after enemy capture on
21 February 1970.

FIGURE 9



Airstrip at Muong Kassy - March 1970.
FIGURE 10

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came, Vang Pao could once again resume the offensive guerrilla role for which he was best suited. The real test came at Long Tieng in March, where the enemy hoped to crack his will to resist. At Long Tieng, the enemy had extended his lines further south than ever, and Vang Pao, getting 200 sorties a day plus reinforcements, was able to consolidate and strike back. General Brown in late March noted the extended enemy forces had dwindled from constant airstrikes. He was confident that Long Tieng could hold. ^{34/}

There was one other element in the ground war which was relevant to the turn the war took in early 1970. The North Vietnamese forces committed to battle were members of elite and experienced units, more highly motivated and more willing to face death than their opponents. This fact was especially true of the enemy sapper units which made several suicide attacks into friendly areas, spreading fear and terror, as well as causing casualties. A Senior CAS Official commented: ^{35/}

"Phou Nok Kok was lost long before the main enemy attack. There was no way to defend it, especially against enemy suicide sapper units. This suicide business frightens the Lao and the Meo. It is completely foreign to them; they don't understand it, and it's something they cannot do themselves."

The Lao forces had never been considered highly motivated to fight, neither those on the side of the government nor the Pathet Lao who joined with the North Vietnamese. The Meos, on the other hand, committed to the defense of their homeland, were considered more dedicated. There was a limit, however, to their willingness to carry the heaviest load of the war, while their fellow countrymen quite obviously relaxed their efforts. To obtain FAR reinforcements

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from Lao regional commanders, even during his last ditch fight at Long Tieng, was a major frustration to Vang Pao. These commanders were often unwilling to relinquish their regular units to a Meo, whom many resented and others mistrusted. Many of the Lao T-28 pilots, who were considered the cream of the Lao armed forces, were unenthusiastic about exposing themselves to too much danger. During the early phase of the battle for Long Tieng, the Air Attache (AIRA) at Vientiane had to plead, urge, and threaten, to get pilots to move to the newly opened airstrip at Muong Kassy, so they could support Vang Pao's forces.^{36/}

Political Impact of Airpower in Laos

In a war where the primary U.S. contribution was airpower and where the very existence of the government was almost entirely dependent upon that power, it was natural that air would have an impact upon internal political affairs, including negotiations for a settlement of the war. It was generally accepted by most U.S. and Lao officials involved in the war that the enemy could take nearly all of the country, if he were able and willing to absorb the losses he would have to take from airpower. As late as February 1970, after the PDJ was lost, Souvanna Phouma announced publicly that "without air support, the entire country will become communist--the entire country will be taken over by the North Vietnamese."^{37/} The Ambassador to Thailand, Leonard Unger, agreed:^{38/}

"NVA strength in Northern Laos is at an all time high and as far as we are aware, will remain at this or a higher figure. Tactical airpower has provided the only balance to the sharp increase in first line NVA troops."

Prior to 1970, enemy dry season offensives rarely went beyond the 1962 demarcation line, which ran roughly from northwest to southeast, starting north

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of Luang Prabang, then going south to the Plain of Jars and almost down the middle of the panhandle. In previous years, the North Vietnamese seemed content to protect their supply corridor running through eastern Laos into South Vietnam. Their advances in 1968 and 1969 were deep enough to create a governmental crisis in Laos. In 1970, however, possibly stung by the defeat he experienced in late 1969, the enemy escalated his effort.

In the face of the NVA offensive, Souvanna indicated, contrary to U.S. Embassy advice, that he planned to hold the Plain of Jars and later moved refugees there to buttress the Meo's will to stand. He made a public statement on 8 February 1970, after the loss of Phou Nok Kok: "We'll fight to the last man to hold the PDJ." The pressures upon Vang Pao and his belief that airpower alone might stop the enemy were partly responsible for the Meo General's failure to carry out the CAS-Embassy plan for a phased withdrawal. Forgetting his role as a guerrilla leader, he began thinking in terms of conventional defense, and he was not trained for that role.^{39/} The Embassy in Vientiane had asked for B-52s in November 1969, and again in January 1970 "for psychological reasons."^{40/} Not only would they provide a demonstration to the North Vietnamese of U.S. determination, but they would also raise the morale of the friendly forces.^{41/} In his latest appeal for approval, Ambassador Godley said:^{42/}

"I cannot guarantee that such strikes would mean Vang Pao can hold the PDJ for the entire dry season, but certainly strikes would give him a breather and would indicate to the enemy that we will not permit him to retake the PDJ without sustaining appreciable losses. As seen from Vientiane, this should be done."

The B-52 strike was approved and on 18 February 1970 it was executed. This was three days before the loss of the PDJ, and in those three days of good

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weather, many of the 200 daily tac air sorties allocated to BARREL ROLL struck targets around besieged Xieng Khouang. The relationship of this intensified air effort to the ground situation, which is fully described later in this report, showed what had been obvious to U.S. air and ground commanders: air support alone could not sustain a ground battle when the supported troops were unwilling to fight.

As happened after the 1968 and 1969 enemy dry season offensives, the 1970 enemy advance was followed by diplomatic moves to reach a settlement. On 6 March, Souvanna Phouma offered the North Vietnamese use of the Ho Chi Minh Trail in return for withdrawal of NVA troops from "the important regions of Laos." When asked whether this meant U.S. planes would stop bombing the trail, he said, "That is a matter for the Americans to decide." Three days later, the Communist Pathet Lao offered a plan for settling the war, including a standfast cease fire. Two Embassy officials in Vientiane indicated the Pathet Lao offer might have been related to the combination of tactical airstrikes, the B-52 strike, and the speech by President Richard M. Nixon on 3 March 1970, spelling out the U.S. role and goals in Laos.^{43/} There was general agreement among the Ambassador, General Abrams, and General Brown that enemy military pressures on Laos had as a major goal the cessation of U.S. bombing of the Ho Chi Minh Trail.^{44/}

The rationale for linking the moves toward peace with the impact of air-power in Laos was explained by an Embassy official. He said that U.S. policy was not to wipe out the Pathet Lao, but to check the North Vietnamese from dominating the country. In the long run, U.S. hopes lay in bringing the Pathet Lao to regard the North Vietnamese more suspiciously and to cooperate with the

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Royal Lao Government, of which they were still officially a part. By providing Souvanna Phouma with airpower, the U.S. gave him a "punch" and some international prestige, and he could use this to bring his fellow countrymen back into the government. For this reason, it was essential that employment of airpower be directed toward stopping the North Vietnamese and not toward bombing and demoralizing the Pathet Lao. If the Pathet Lao were completely demoralized, then the NVA would have more say in Pathet Lao affairs in the northern provinces. Like their countrymen on the other side, they were reluctant fighters and would conceivably respond to offers toward reconstituting a neutralist government, if differences arose between them and their Allies, the North Vietnamese. The separation of the Pathet Lao from the North Vietnamese was a major problem, which made it "terribly important for the Air Force to be sensitive in its bombing policy," since a peaceful settlement could come about only if "necessary" targets were hit.^{45/} The goals of the U.S. in Laos were not the same as those in the Republic of Vietnam. With a minimum investment, and heavy reliance upon air, the U.S. had managed to keep Laos alive, contrary to the beliefs of many, including Arthur Schlesinger, who said in 1963 that the tiny country had gone down the drain. If airpower could continue to focus on the North Vietnamese and make their losses incompatible with their possible gains, the enemy would adjust his objectives, perhaps even make a patchwork settlement.

Outlook

Enemy occupancy of the Plain of Jars and Muong Soui early in 1970 reestablished the relative territorial positions in Laos that existed in June 1969. There was a difference, however, in the overall situation. The enemy could not use the plain, which was exposed to airstrikes and devoid of its former

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large caches, medical facilities, and most important, a population base for coolie labor and portage. Vang Pao's guerrilla army had escaped the offensive with very low casualties and was resuming a guerrilla posture. However, with two months of dry weather ahead and with the enemy making probes around Long Tieng, the possibility of further enemy initiatives was high, despite the peace overtures of early March. The most hopeful outlook then was that Vang Pao and tac air could hold the enemy off until rains began falling in June, a time when, with air support, he could resume an offensive guerrilla role. The pessimistic view was that the enemy would go beyond his objectives of previous years, possibly overrun Long Tieng, or even make a thrust at Luang Prabang or Vientiane. There was little doubt that the primary deterrent to such attacks would be airpower.

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CHAPTER II

END OF OPERATION ABOUT FACE

Early in November 1969, the Royal Lao Government (RLG) forces, which had been engaged in Operation ABOUT FACE since the preceding summer, were still on the offensive, but were slowing down. The Plain of Jars was in RLG hands for the first time in five years, and the enemy (NVA/PL) had lost quantities of supplies and suffered many casualties during his four-month retreat toward the North Vietnamese Border.^{1/} No one seriously believed in November that the enemy would be content to remain with his back against the NVN Border. It was only a question of how long his counteroffensive could be delayed. Once on the eastern side of the PDJ, the Government Commander, General Vang Pao, buoyed by his recent success and supported by King Vathana and the Prime Minister, came to believe the plain could be held. By taking the fighting to the enemy in the air and on the ground, he reasoned, he could disrupt the enemy's resupply activity and delay the expected NVA/PL dry season offensive.^{2/}

November Plan: Ground

On 6 November, Vang Pao assembled his commanders in the PDJ and outlined his strategy for the next phase of the campaign.^{3/} He divided his forces into three groups, each of which was to concentrate on one of the three main gateways into the plain. The RLG forces in the southeast were to advance eastward from Xieng Khouangville to occupy Ban Sa Noi (LS-119), and the hills overlooking Route 72 "to block the enemy trail network".^{4/} Units of the second group were to push northeastward from Nong Pet, near

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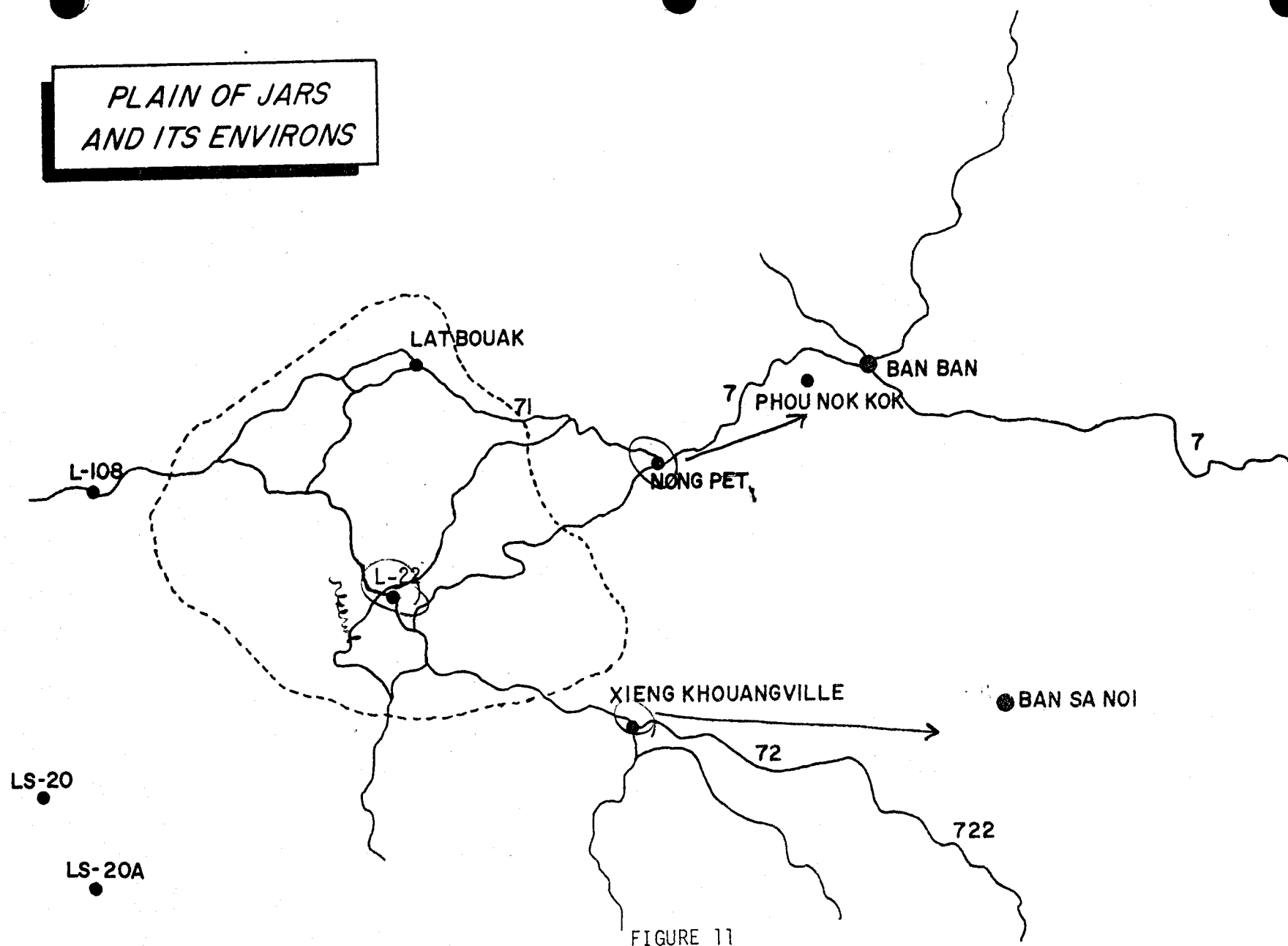
the junction of Routes 7/71, toward Ban Ban (LS-10) and, in the process, establish themselves atop the strategic hilltops along Route 7 from which they could interdict enemy supplies coming down that route. The most important of these hills was Phou Nok Kok, which was already in friendly hands. The third group was to form a reserve and security force to be stationed partially in the PDJ at Xieng Khouang Airfield (L-22) and partially on the mountaintops rimming the PDJ to the north near Phou Kout and Lat Bouak.^{5/}

To support this plan, Vang Pao asked for more M-16s, 105-mm and 155-mm howitzers, armored cars, and 20 M-41 tanks. He planned to hold nearly all of the estimated 10,000 refugees in the PDJ and equip them for self-defense.^{6/} He also figured that by keeping the refugees there he would encourage the U.S. Embassy in Vientiane to be more willing to support his desire to hold the plain, while at the same time making his own soldiers more willing to fight.^{7/}

November Plan: Air

At the same time, the fiery general asked for "an additional 50 sorties for BARREL ROLL for 10 days,"^{8/} which would raise to more than 200, the daily USAF strike sortie rate. General Brown, Commander of 7AF, informed Vang Pao that he would give him all the air support he could and that he would help him hold the ground he gained.^{9/} The 7AF policy for the coming campaign was:^{10/}

*PLAIN OF JARS
AND ITS ENVIRONS*



[REDACTED]

20-000000

"To support Vang Pao to the maximum extent feasible, consistent with STEEL TIGER requirements. It will most likely be necessary to trade, as in the past, recent gains in territory for time, but the air support necessary to keep Vang Pao from a decisive defeat will be provided."

This promise reflected the realities of the situation. As Deputy COMUSMACV for Air, General Brown's first responsibility was the defense of U.S. troops in Vietnam which, as far as out-country air operations were concerned, translated into STEEL TIGER sorties against the Ho Chi Minh Trail.^{11/} During the summer and fall of 1969, when Operation ABOUT FACE was in full swing, enemy activity on the trail was in its wet season lull and allowed more sorties (over 200/day) to be flown in BARREL ROLL. The new phase of ABOUT FACE, however, coincided with the resumption of NVN traffic in STEEL TIGER and the need for more sorties there. An additional factor was the substantial reduction, begun in September, of the total USAF sorties that could be flown in SEA.^{12/} What General Brown was telling Vang Pao was that he would give him all the air support he could, within the context of the competition for the reduced amount of available airpower. Further, the 7AF Commander, by saying he would support Vang Pao as long as the Meo General could (or wanted to) hold his positions, highlighted the fact that to a large measure, success or failure depended ultimately upon the determination of the ground forces to remain in place. "Tactical airpower," said General Brown, "and...gunships are no substitute for ground operations."^{13/}

During November 1969, USAF scheduled each day an average of 141 strike sorties to support ABOUT FACE (App. III). Approximately 55 percent of these sorties were allocated to the Raven FACs who used them to support RLG troops-in-contact or against targets of their own selection. About one-fourth of the total number of sorties were scheduled to Tiger and Laredo jet FACs for daytime strikes against interdiction points, trucks, bivouac areas, and supplies. The remaining sorties were devoted to the night effort, which included gunships and flareships for defense of Lima Sites.^{14/} Although these percentages remained fairly constant on the daily planning messages, in practice, they often were altered to reflect the changing ground situation. During times of widespread TICs, for instance, the Ravens got more of the sorties. When ground action was light, on the other hand, a larger percentage of the air effort was directed to attack roads and the enemy's logistic base.

November 1969

No sooner had Vang Pao's plans been formulated than the enemy strengthened his resistance to further RLG expansion and even began, at first in a limited fashion, to push back Vang Pao's forces. This was particularly true at the center of the RLG line near Ban Ban. In October, Vang Pao's forces had captured the 4,700-foot Nok Kok Mountain (Phou Nok Kok) which overlooked Route 7, eight miles west of Ban Ban, and were then located in two positions atop the mountain. The upper position was manned by approximately 320 men and the lower position, to the northeast, contained the command post and about 280 troops. Airpower kept the RLG forces on these vantage points, from

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which they were able to mine and shell Route 7^{15/} and report enemy movements. During the first week in November, what had been a relative lull was broken when Phou Nok Kok began receiving what would become an increasing series of rocket and mortar attacks. On 9 November, the government positions on the summit were attacked by NVA/PL units which were driven off with a loss of 13 dead and 15 wounded.^{16/} Two nights later, the enemy made four unsuccessful probes on the two positions, only to lose 18 men to gunship fire.^{17/} On 23 November, an SGU column, which was moving from the command post to the top of Phou Nok Kok, was ambushed by an enemy company. Air-strikes were called in to hit the enemy's positions and after an hour he withdrew, leaving 11 bodies on the battlefield.^{18/} Throughout November, probing assaults against Phou Nok Kok and RLG positions on other mountain-tops were repulsed with ease, as the relatively clear evenings allowed USAF gunship support whenever requested.

On the two flanks of his line, at Xieng Khouangville on the right and Lat Bouak on the left, Vang Pao managed to hold his own and even make some minor gains between Xieng Khouangville and the NVN Border, despite enemy resistance. His plan to infiltrate the 72/722 trail system met with some success. On 11 November, a guerrilla battalion supported by air successfully struck an NVA supply unit on a trail only eight miles west of the NVN Border. Four enemy soldiers were killed by the airstrikes and the SGUs captured a number of enemy weapons.^{19/} Six days later, a 113-man SGU/ADV unit began an assault on Phou Nam Pong, a mountain in the same area.^{20/}

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After three days of USAF/RLAF strikes against the hill's defenders, the guerrillas took it.^{21/} This was the easternmost point of expansion of Operation ABOUT FACE.

On only 12 days in November did the ceiling exceed 5,000 feet and the visibility reach 5 miles (App. II). Yet so great was RLG confidence in USAF air support that guerrillas often asked a gunship commander to fire, even though he considered it unsafe because of poor visibility or low clouds. On 19 November, for instance, Badman FAG, east of Xieng Khouangville, asked Spooky 01 to shoot "fifty meters from the marker," even though his position was completely obscured and the ground marker was only occasionally visible when it flowed through thin layers of the low stratus deck. The aircraft commander wisely did not fire because of possible Short Rounds (the friendly troops were within 100 meters of the aiming point), and the Spooky returned to Udorn with most of its ammunition.^{22/}

That these air supported forays into the heart of the 72/722 trail structure were hurting the enemy was apparent from the NVA/PL response. Throughout November, he kept the pressure on Xieng Khouangville, hoping to force Vang Pao to pull his forces from the trail 25 miles to the east to defend the town and its airstrip.^{23/} On 9 November, a small force occupied the airstrip but was driven off the next day.^{24/} During the early morning hours of 18 November, the enemy, taking advantage of low-lying clouds and poor flying weather, again seized the airstrip. For one week after the fall of Xieng Khouangville, poor weather conditions and visibility restricted

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tactical air operations to three or four hours a day. When the weather cleared on 26 November, Vang Pao, using air, Russian tanks, and howitzers, retook the shattered town, apparently convincing the enemy for a while that he intended to hold it. ^{25/}

Action to the north of the PDJ in November centered on Phou Pheung, a 1,400-foot peak overlooking the junction of Routes 71 and 74 near Lat Bouak. The enemy overran this strategic post early in the month. Three RLG counter-attacks during the week of the 20th failed to dislodge him. Finally, on the fourth try on the 28th, the enemy was driven off by a combination of airstrikes and 155-mm howitzer fire. ^{26/}

At the end of November 1969, the RLG appeared to be in its strongest military and political position in years, so Prime Minister Souvanna Phouma forcefully reemphasized his strong demand that a bombing halt in Laos must be preceded by a withdrawal of NVA forces. ^{27/} For political exploitation of the recent victories, Souvanna made plans to tour the PDJ. After an initial postponement, apparently to allow a sufficient number of Forces Armee Neutre (FAN) troops to be flown into Xieng Khouang Airfield to act as his honor guard, the Prime Minister formalized his intention to visit Long Tieng (Vang Pao's headquarters) on 30 November. From there, his intention was to go to Xieng Khouang and the rest of the PDJ, including Phong Savan, Khang Khay, Xieng Khouangville (if security permitted), and Muong Soui. ^{28/} Reporting Souvanna's intentions to the Secretary of State and embassies throughout the world, the U.S. Ambassador to Laos commented as follows: ^{29/}

[REDACTED]

"This morning we urged that he make an appeal to the PL to join him peacefully on PDJ and that Souphanouvong meet with him there. The Prime Minister was totally noncommittal, stating that he did not know what type of statement he would make on the PDJ until he had consulted Vang Pao and others that might meet with him in Long Tieng."

On 30 November, the Prime Minister, accompanied by a 14-man party which included Colonel Sengsouvangh, Commander of the FAN forces, a photographer, and a reporter, arrived at Long Tieng. After a briefing by General Vang Pao on Operation ABOUT FACE, Souvanna raised what the ambassador called "some pertinent questions," one of which was whether the PDJ could be held. Vang Pao said it was difficult to respond, but "MR II troops would do their best as was being shown by casualties now being taken in order to consolidate the present position."^{30/}

Having visited Khang Khay and Lat San, then overflying Xieng Khouangville and Muong Soui (security did not, after all, permit a personal appearance), Souvanna told Vang Pao that he fully supported the current military operation and would like to see the PDJ held. "No one," said the Prime Minister, "could condemn the RLG for defending the PDJ because he had previously controlled Khang Khay and was now merely taking it back." Reassured by Souvanna's support, Vang Pao asked for help to rebuild the Plain of Jars. Souvanna replied that he would "seek U.S. Government assistance."^{31/}

December 1969

During the first week in December, an increase in enemy activity was noted. From 2-5 December, 205 loaded trucks were detected moving along Route

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7 from North Vietnam into Laos--the highest number in any four-day period since the beginning of Operation ABOUT FACE.^{32/} Although Route 7, east and west of Ban Ban, was still blocked by USAF interdiction and SGU patrols, there were less desirable alternate routes of supply, such as the trails to the northwest of Route 7 feeding down into the Lat Bouak strongholds and the even more extensive 72/722 trail system, which ran almost directly west from North Vietnam to Xieng Khouangville. USAF was prevented from interdicting this latter trail system by the presence of RLG guerrillas throughout the area.^{33/}

On the night of 2-3 December, the enemy launched a series of ground attacks on Phou Nok Kok and the 7/71 road junction to the south. Observers in Vientiane stated that "the counteroffensive appeared underway."^{34/} After a 300-400-round mortar bombardment, a battalion of NVA, preceded by sapper units using bangalore torpedoes and satchel charges, assaulted the Phou Nok Kok command post from three directions. The ensuing battle lasted four hours before the guerrillas, aided by gunships, forced the enemy to withdraw. Another attack the next night was equally unsuccessful, and airstrikes on 4 December against NVA hillside positions brought the enemy counteroffensive to a halt:^{35/}

"With FAC direction and tac air support, however, some of the gunners may never make another load. At 1100 hours on the 4th, for instance, enemy troops fired five rounds into the command post area, killing one friendly. Raven FACs immediately silenced the guns and destroyed about eight bunkers (with USAF tac air). A short while later at 1300 hours, enemy soldiers in the area fired a barrage of small arms into the same friendly position. Ravens directed air

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into the position and the riflemen ceased firing. At 1415 hours, the back blast of a recoilless rifle was observed in the area. Ravens again put air in on this target silencing the recoilless rifles and destroying 10 or 20 bunkers."

When friendly ground patrols combed the area on the following day, they discovered 50-60 NVA bodies strewn through the ravine where the aircraft had struck during the two previous days.^{36/} Reports that filtered in during the following week confirmed the enemy had been swept from the mountain by airstrikes which destroyed 10 bunkers, 50 feet of trenches, and much equipment.^{37/}

The seriousness of the attacks on 3 and 4 December and the interpretation of them at Vientiane as the possible beginning of the enemy counter-offensive are mirrored in this field office report of 5 December 1969:^{38/}

"Every historical precedent justifies the expectation that they [NVA] will attack in Laos, as they have in fact begun to do....Most recent intelligence indicates the enemy may be massing for a concerted movement which would combine frontal pressure on Vang Pao's forces from the northeast with pincers at his rear from the north and southeast which would try to cut his lines of retreat."

Plans For A Phased Withdrawal

No further enemy ground attacks against Phou Nok Kok came for two weeks. Heavy losses from airstrikes appeared to have disrupted the NVA timetable and given General Vang Pao time to prepare an operation plan for the defense of the PDJ. This plan, which he issued from his headquarters at Long Tieng on 12 December, recognized that "North Vietnamese and Pathet Lao forces are presently attacking friendly forces...with the objective of

FIVE DEFECT LINES for Muong Soui

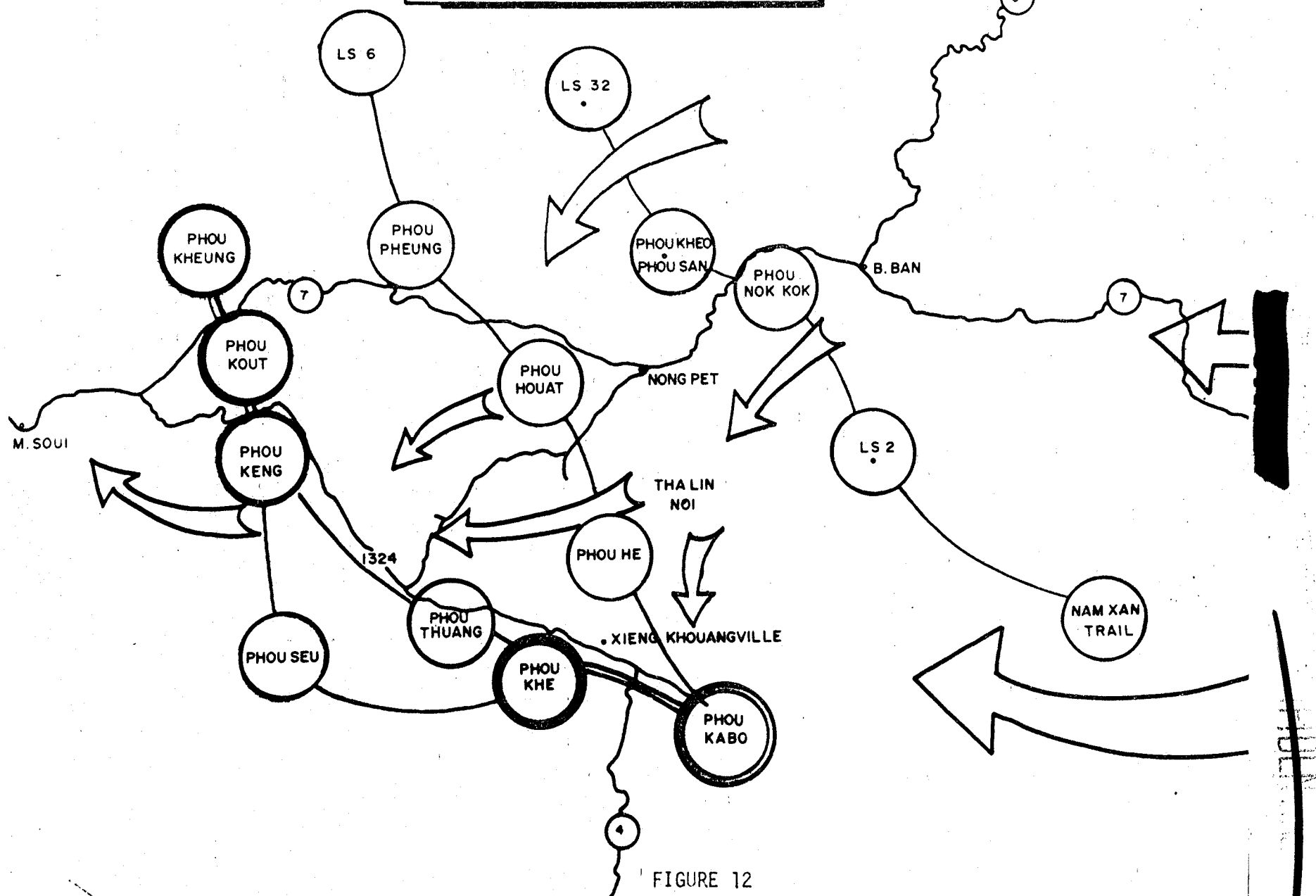


FIGURE 12

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seizing the PDJ and continuing the offensive in the direction of Muong Soui and Sala Phou Khoun." It provided for five positions or "lines" and was designed to insure a gradual withdrawal, while airstrikes inflicted maximum casualties on the enemy. To do so, critical terrain features were to be held as strong points, and a mobile reserve composed of infantry, armor, and artillery, in coordination with tactical air, was to be employed to regain any of the positions lost due to enemy action. The following troops were under Vang Pao's command: ^{39/}

	<u>ADC</u>	<u>SGU</u>	<u>TOTAL</u>
1st Defensive Position	700	1,250	1,950
2d Defensive Position	300	1,400	1,700
3d Defensive Position	700	450	1,150
4th Defensive Position	360	70	430
5th Defensive Position	250	70	320

Against Vang Pao, the enemy was estimated to have 16,000 NVA regulars, plus 6,000 Pathet Lao and 750 Dissident Neutralist troops.

"Against such opposition, the RLG forces," a CAS official said, "know they can't hold everything," but their "objective is to hold as much as possible for as long as they can." ^{40/} This formal defensive plan, placing Vang Pao's guerrillas in a series of preordained, static positions which could be effectively defended against superior enemy forces only by close air support, was the first RLG strategy of this type in the war there.

Change in Air Plans

At the same time, a modification took place in air planning. Until mid-December 1969, the majority of sorties which did not go to the Ravens for

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TICs were devoted to the task of interdicting the enemy LOCs, especially Route 7 on either side of Ban Ban. Only 8-10 sorties per day (out of a November daily average of 141) were scheduled against logistic targets such as trucks, truck parks, bivouac areas, and supplies. At first, this interdiction campaign followed the familiar pattern, five or six strategic points attacked daily, but by mid-December, the dryness of the roads made it easier for the enemy to bypass the interdiction points. Also, the number of sorties available was insufficient to provide the daily attention needed. As TICs increased, "air coverage was complicated," noted the Air Attaché in Vientiane, "by air being pulled off the route frequently to support troops under attack."^{41/} As a result priorities were shifted. On 10 December 1969, the 7AF/13AF DIT stated, "We feel that more emphasis should be placed on logistics." In the future, the priority in targeting was to be given first to logistic targets, then to road interdiction, with the proviso at all times that troops-in-contact would receive any support needed. The intention, however, was not just to hit "an obviously lucrative target for BDA."^{42/} As the 7AF/13AF DI emphasized:^{43/}

"From now on, you're not going to find highly concentrated targets. The enemy has learned the art of dispersal, camouflage, hiding under trees, and spreading out. These, the targets which are hardest to see and get BDA from, are the ones which will hurt the enemy most. These are the kind which appear as perishable area targets (PATs). Even if the FACs don't see anything, we well know that the enemy is aware how tac air can hurt him. Please, regardless of BDA, hit those fragged targets. For instance, all source intelligence knows that the enemy is moving off the roads some 2,000-4,000 meters. If the FACs VR 200 meters from a road, they're not going to see the enemy. Have blind faith. Don't be discouraged. From now on, the number of fragged targets



Landslide caused by airstrikes against
Route 61C about five miles northeast of
Ban Ban (194143N 1033610E), on 17
November 1969.

FIGURE 13



Destroyed and damaged enemy vehicles on
Route 7, about six miles west of Ban
Ban after airstrike.

FIGURE 14

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is going to be counted and recorded. If there's no BDA, it's going to be the responsibility of the intelligence people, not the pilots."

The new interdiction program was adopted the next day. The number of daily road interdiction flights were reduced. But these were flown against a smaller number of widely separated points on Routes 7 and 61 to cause the enemy to bring in more repair crews and to spend more time moving his repair facilities from one remote location to another. At the same time, sorties scheduled against logistic targets increased until they reached as high as 43 per day.^{44/} This change in targeting was reflected in the BDA: ^{45/}

	<u>Nov</u>	<u>Dec</u>
Road Cuts	120	45
IDP Cuts	47	4
Trucks D/D	71/139	113/89
Supplies Destroyed	56	74

Weather conditions proved a major factor. Throughout December 1969, ceilings reached 5,000 feet and there was visibility 5 miles on only 17 days (App. II). A planned strike, for instance, against a major staging and supply area on 9 January 1970, was repeatedly canceled because of adverse weather,^{46/} and results of strikes against a large number of other targets were not observed because of weather or haze. Yet Route 7 remained blocked and the enemy continued to be slowed down by his need to bypass it. Villagers reported that enemy troops could not move vehicles west on Route 7 past a point 10 miles east of Ban Ban, but they were working on the road day and night. While the road was being repaired, supplies were being

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carried from this interdiction point southwest to Ban Houat and along the foot of the mountain range south of the Ban Ban Valley to a cave storage area.^{47/}

When the shift of emphasis to logistic targets occurred, the Rules of Engagement for airstrikes in the BARREL ROLL Buffer Zone were relaxed. In October 1969, the Joint Chiefs of Staff (JCS) had given permission to strike within four miles of the NVN Border, but only between Route 7 and 19° 10' N to the south. The Ambassador in Vientiane had further restricted these strikes by authorizing them only when they were controlled by Raven FACs or ground FAGs. But by mid-December, troops and other lucrative targets multiplied both north and south of the permissible strike area. Consequently, on 13 December, the strike area was expanded both north and south and strikes were authorized under the control of any type of FAC (Raven, Firefly, Tiger, or Laredo).^{48/}

Command and control changes were also proposed at this time. If a C-130 were lost to ground fire, the 7th Airborne Command and Control Squadron D0 stated on 10 December, the Airborne Battlefield Command and Control Center (ABCCC) could not guarantee enough aircraft would be operationally ready to cover all four orbits (one C-130 flareship had been shot down in STEEL TIGER on 24 Nov 1969). Accordingly, he proposed that four Alleycat (BARREL ROLL night orbit) personnel fly with the Batcat aircraft whose primary mission was to monitor Route 7 sensor strings on the Rose Orbit. The plan was to keep the C-130 on standby in case the controllers on Batcat could not handle the traffic.^{49/} Flying two nights a week with

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Batcat, controllers found that during December, they could adequately handle all night strikes in BARREL ROLL, thus providing needed relief for crews and airframes alike. Declared a success,^{50/} the Alleycat/Batcat fusion was never permanently implemented, however, because of the decision to terminate the Rose Orbit on 24 January 1970.

To improve strike tactics, standard four-ship attack flights were split into flights of two after mid-December, with the first element scheduled for a slightly earlier time over target (TOT) than the second element. Most of the F-4 and F-105 pilots thought it a great improvement. FACs, both jet and prop, believed that two-ship elements were easier to handle, and everyone agreed that for the normal BARREL ROLL target, two aircraft carried enough ordnance to do the job.^{51/}

At the same time, new aircraft and ordnance were introduced into BARREL ROLL. From 13 December 1969 to 19 January 1970, U.S. Marine Corps A-6 aircraft, equipped with the Airborne Moving Target Indicator (AMTI) system, moved from STEEL TIGER to targets along Route 7, east of Ban Ban. The results were limited. On Christmas Day, for instance, the AMTI aircraft expended against six trucks, with resulting BDA of one secondary fire.^{52/} Unable to recover or refuel at bases in Thailand, the A-6s had just 12 minutes of "play time" over their targets.^{53/} Accordingly, the month-long AMTI experiment was best summarized by one pilot as "a flop."^{54/}

More successful was the MK-20 Rockeye II cluster bomb, previously used by the Navy in STEEL TIGER and the Republic of Vietnam. Containing 247

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bomblets, each capable of penetrating approximately 7.5 inches of armor plate, the Rockeye could cover a 200-300-foot area with shaped charges which were effective against hard targets as well as personnel.^{55/} Two tests were conducted by the F-4 wings flying from Ubon and Udorn, Thailand, in November and December 1969 against selected AAA sites in Laos. Results, according to the 7AF evaluation report, were satisfactory:^{56/}

"BDA on antiaircraft guns was limited to a determination that the guns had been silenced or that probable damage had been inflicted. During the evaluation, 12 of 45 guns were attacked while actually firing. All 12 guns were silenced."

In addition, it was noted that Rockeye was "very effective against trucks. Six trucks were struck, three were confirmed destroyed, and three were probably damaged. They did not move for 24 hours."^{57/} The pilots believed that Rockeye worked. "One thing we've found," said a project officer, "every time an AAA site is hit, they evacuate it."^{58/}

NVA Limited Counteroffensive

Shortly after these planning adjustments were made, the enemy tried again to penetrate the PDJ. On the night of 17-18 December 1969, he launched attacks on all three fronts in what was viewed as a "limited counteroffensive."^{59/} The most serious assault was a sapper attack on Lima-Lima (L-22), the RLG forward headquarters in the center of the PDJ. The weather had been bad for three days prior to the attack, and the enemy took advantage of the protection this afforded him from airstrikes. An estimated two NVA sapper companies, one of which had destroyed the "inaccessible" Site 85 the year before,

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attacked at 0130 and maintained the assault until 0400. A complete surprise, this attack killed 42 friendly soldiers and wounded 46, while three PT-76 tanks and large quantities of ammunition and POL stocks were destroyed. On the same night, government positions in two other sectors (Xieng Khouangville and the 7/71 junction) came under simultaneous attack, a pattern which continued for the next two days.

The shelling of Phou Nok Kok continued. By 18 December, the enemy death toll around the mountain had reached 400, and CAS estimated the wounded at 1,000, with the comment that "a high percentage of these casualties are the result of the continuous bombing and mining by USAF airpower."^{60/} Mark 36 mines were used and CBU-42 was repeatedly seeded along infiltration routes and in suspected base camp areas. On 20 December, AIRA requested that areas on and around Route 7, east of Ban Ban, which had been previously seeded, receive additional munitions because of the "critical situation believed to be developing in this area."^{61/} Two days later, the trail network east of Xieng Khouangville was opened for seeding because of "heavy infiltration."^{62/} Results were excellent:^{63/}

"CAS officers continue to report that the CBU-42 detonates throughout the day and night. Such activity hampers enemy activity to such a degree that, according to ralliers, and other significant intelligence, morale is definitely shaken. The continued success of Operation ABOUT FACE is contingent upon infiltration of supplies and personnel by the enemy. The CBU-42 seedings to date have hurt the enemy severely and have alleviated pressure on Phou Nok Kok. One unconfirmed report indicated that an enemy company of 200-300 men was reduced to approximately 100 men, many of whom were wounded, after walking through an area seeded with CBU-42."

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Not until after the nights of the 20th and 21st did the pace once again slow down, the result of what one CAS official called the enemy's being "taught a lesson: He tried a familiar tactic--simultaneous attacks on many sites. Alleycat and the A-1s handled attacks on 8-10 positions very well indeed."^{64/} Called an "outstanding response in providing night air support" by AIRA,^{65/} prompt airstrikes, graced with good flying weather after the first night, helped determined ground troops hold their positions and once again delay the enemy counteroffensive.

At this time, LOC packages were also emplaced along Route 7 for the first time, mainly at points SC3504 and SC3196. In conjunction with the sensor strings in the same area, the effect of the packages could be measured for the relatively short time that both the sensors and packages were active. Prior to 20 December, weather conditions had prevented package delivery, but on 20, 22, 23, and 24 December, emplacements of MK-36 and delayed MK-82 munitions were made. Attesting to the effectiveness of the packages was the sharp drop in truck traffic which accompanied each delivery. Between 1 and 19 December, traffic averaged 75 trucks per day, but during the four-day seeding period, truck flow averaged only 10 daily. For the remainder of the month, 43 trucks per day were detected. At the same time, unseeded^{66/} lines of communication were quite active:

"Route 19 between the NVN border and Sop An remained in excellent condition with all road cuts being repaired. The Route 6/61/68 network supported moderate-to-heavy truck traffic and appears to be serving as a secondary resupply route in northeast BARREL ROLL."

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SENSOR STRINGS ALONG ROUTE 7K

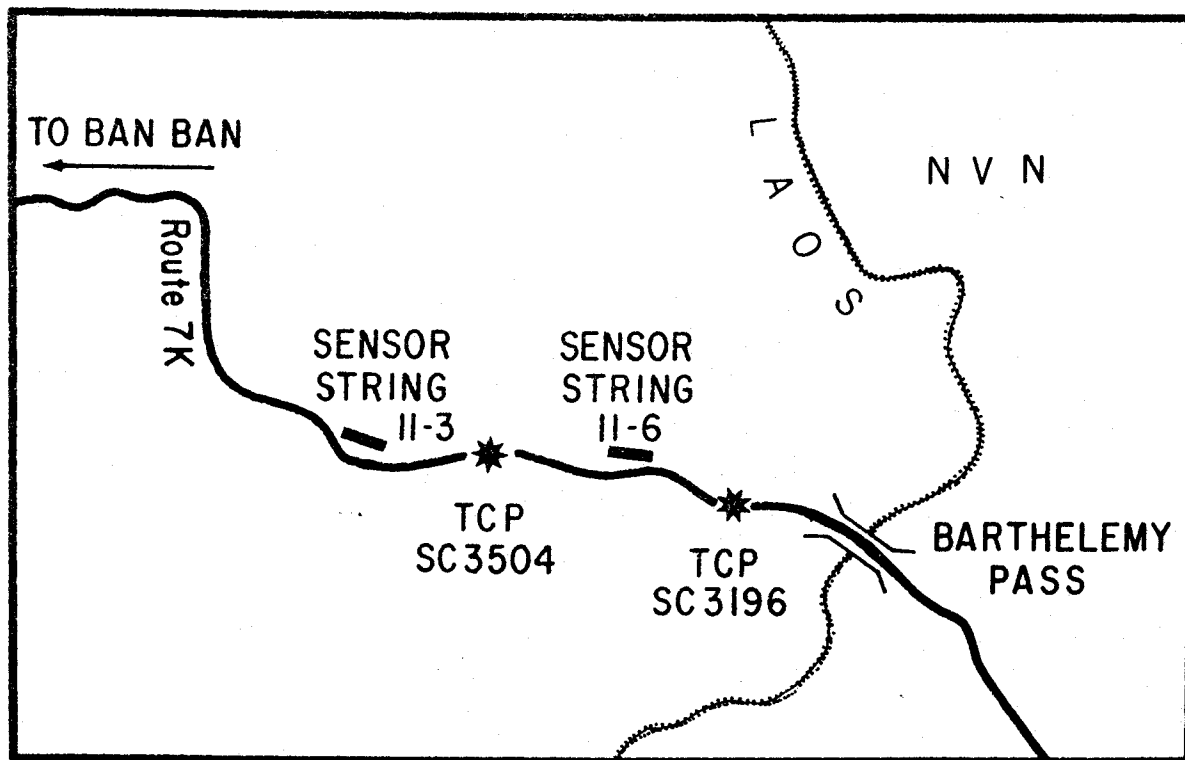
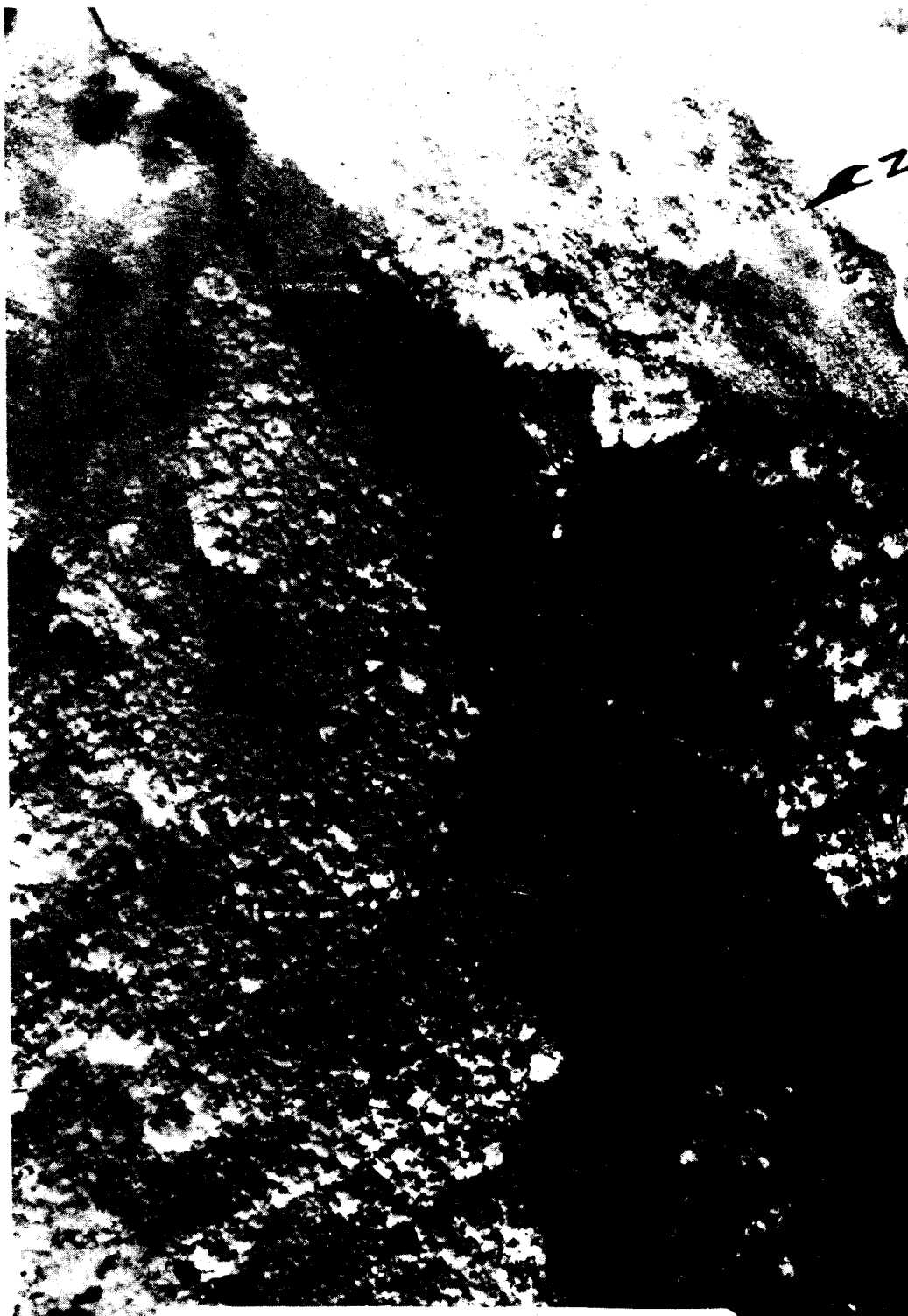


FIGURE 15



Ban Den Din (SC 3196) seeding segment
on Route 7, west of the NVN Border.

FIGURE 16

SENSOR DETECTORS VS PACKAGE DELIVERIES

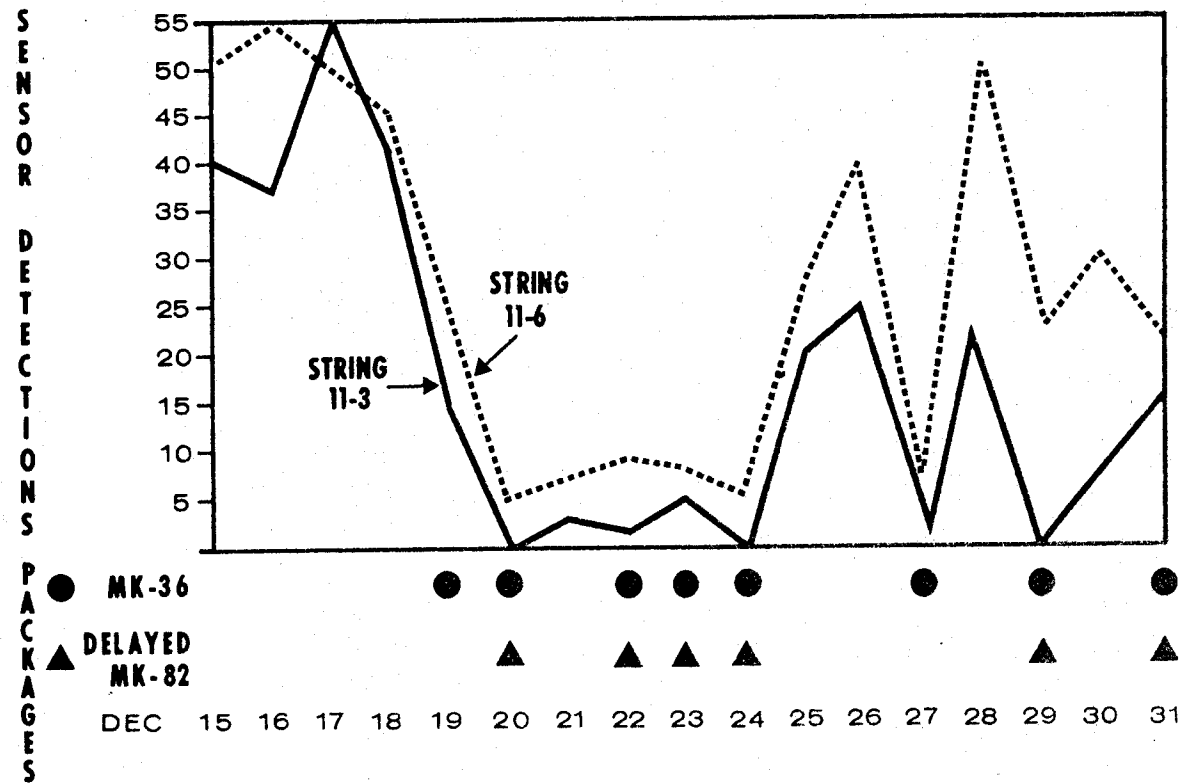


FIGURE 17

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At year's end, there were still differing estimates of the enemy's logistical condition and his ability to mount a successful counteroffensive. In his 31 December assessment of enemy intentions, the U.S. Ambassador to Laos stated, "the enemy's capability is limited only by his strategic decisions as to how much he wished to commit to the area. He has ample supplies and manpower in North Vietnam and ready access to the area." In short, according to the Chief of U.S. Military Assistance to Laos, the enemy could take anything he wanted if he were willing to pay the price.^{67/} The 7AF Intelligence was less apprehensive:^{68/}

"While the enemy does have ready access to Laos, due to geographical proximity, he does not have 'free' access to the eastern regions leading to the PDJ. The use of tac air in interdiction and truck killing roles has impeded his logistics movements and extracted a rather high price for the supplies that have been successfully moved. The enemy is still having a difficult time in building his logistic network west of Ban Ban, and enemy units in this area are very poorly supplied and plagued with sickness and low morale."

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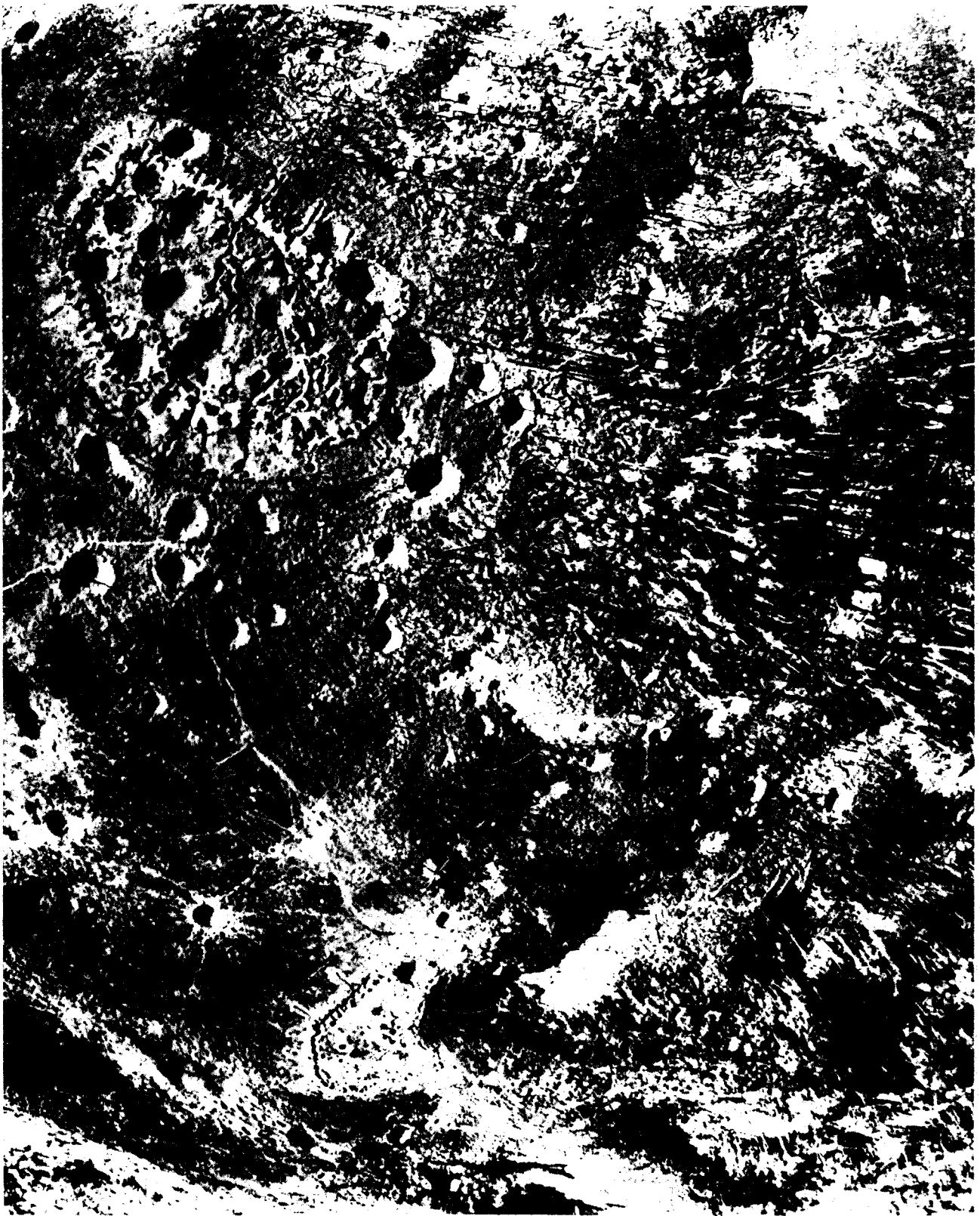
CHAPTER III

LOSS OF THE PLAIN OF JARS

The new year brought not only low ceilings but reduced visibility. Ceilings during January 1970 above 5,000 feet and visibility above 5 miles occurred only 12 days of the month. Except for occasional periods in some areas of BARREL ROLL, broken clouds prevailed with low stratus and fog every morning, nearly all evening, and sometimes all day. Rarely would the PDJ area be workable before noon, and on many days there were continual low clouds and fog in the valleys, unusual conditions which the enemy used to his advantage. "In previous years," recalled the 7AF/13AF DO, "I can remember nothing but blue skies during this period."^{1/}

Phou Nok Kok

NVA pressure on Phou Nok Kok increased after the first of the year. On the night of 2-3 January, 65 mortar and recoilless rifle rounds were dropped regularly into one position, and three separate NVA groups assaulted government positions on the summit and slopes of the mountain.^{2/} Nightly thereafter the enemy repeatedly attacked the hilltop positions, accompanied by 120-mm mortar, rocket, and rifle fire. As was occurring in nearly all other areas, the increasing pressure on this crucial position indicated the enemy was making a more determined effort than ever to dislodge the SGUs who, with air support, had held Phou Nok Kok for the past three months under relentless, soon to become intolerable pressure. To complicate matters, between 5-10 January, 219 of the 691 fraggd sorties, most of which were scheduled to the Raven FACs to support troops-in-contact, were diverted because of weather.^{3/}



Appearance of Phou Nok Kok on 14 January 1970, two days after its capture.
FIGURE 18

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At this same time, the decision was made to evacuate refugees from some outlying areas. On 5 January, responding to a telephone call received at 1700L the night before, a total of ten CH-3s and two Jolly Green HH-53s aided Air America helicopters in removing approximately 10,000 Meo men, women, and children from the encircled LS-184 area, northwest of the PDJ. Staging from Long Tieng during the period 5-14 January, the CH-3s flew 397.9 hours and the HH-53s 86.9. In all, the USAF contribution accounted for 5,763 people and 293,000^{4/} pounds of cargo transported to relocation areas at Muong Soui and Vang Vieng.

On the night of 9-10 January 1970, the weather at Phou Nok Kok was zero-zero, and the enemy took advantage of the conditions to launch a major ground assault. When three NVA battalions hit the mountain before sunrise on the 10th, one flareship supported the 600 men on the summit.^{5/} After a brief encounter, the friendlies withdrew from the upper ridge. For the next two days, the lower command post held out in the face of intensive shelling, particularly from the newly-captured ridge above it. But the weather tied the Ravens' hands. As one later recounted:^{6/}

"For three days we had _ _ _ weather. One day I went up there and got a little hole at Ban Ban and went down in and looked down on a 500-ft. overcast. The poor guys were taking all kinds of incoming. There was no way I could help except fire a few rockets for them"

On 12 January, there was a low overcast at Phou Nok Kok and the visibility throughout the morning was one-half to one mile. The enemy, backed up by a mortar barrage and wielding flame throwers, attacked the command post but was turned back with the aid of flareships. Seventy NVA soldiers died in this

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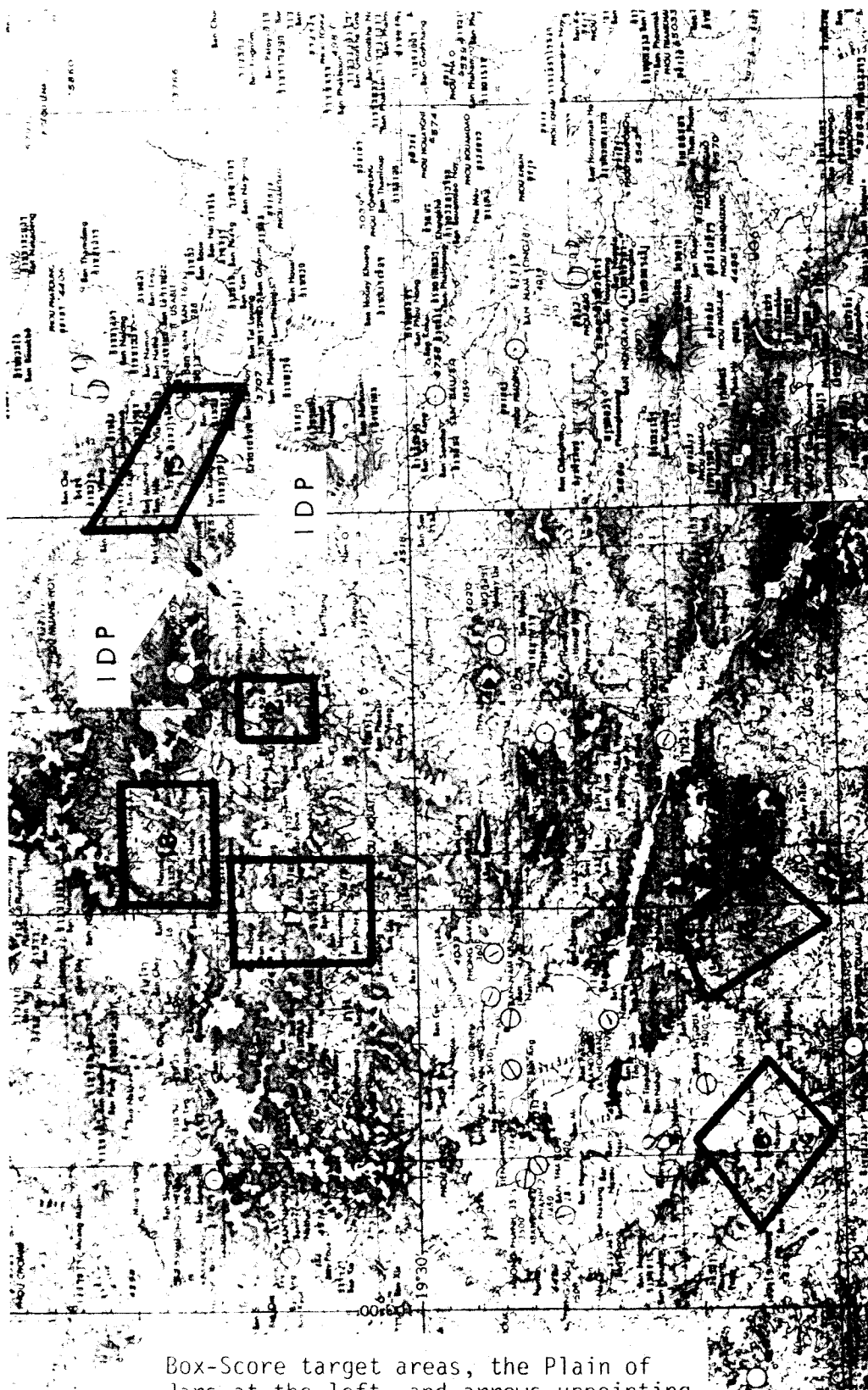
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attack. But later in the day, after the enemy had been driven off, the RLG battalion commander ordered the destruction of his heavy equipment and radios and led his men from the hilltop. They were not under attack when they left the command post; they "just didn't want" to remain there without air support.^{7/} A Senior CAS Official put this light on the RLG reliance on air:^{8/}



"It worked on the offense. They then thought of air as their defense, and expected air to defend them. When it didn't, they got scared and ran....At Phou Nok Kok, they couldn't get air because of the weather....After three days, they were surrounded by three battalions. Two hundred eighty men remained at the command post. They were hit the next night. During the day there was no air. They figured the weather wouldn't break so they left."

Friendly casualties were light; all SGUs were later accounted for except 12. On the other hand, the bodies of more than 600 NVA soldiers were left on the mountain slopes and snarled in the perimeter wires of the guerrilla outpost, the result of the attempts to take it over a six-week period. The Meo irregulars tried several times during the following week to retake the hill, each time without success. Weather conditions continued bad. In one attempt on 16 January, two SGU battalions were posed at the base of the slope but would not move, because a dense cloud cover deprived them of an air umbrella.^{10/}

Again on 29 January, two Spooky missions were aborted after arriving over their targets with weather below working minimums, and that night the enemy enjoyed freedom from gunship firepower from 2140L until daybreak.^{11/} With weather depriving them of their "magic wand," the SGUs began to show a definite loss of confidence.



Box-Score target areas, the Plain of Jars at the left, and arrows uppointing two main interdiction points on Route 7.
FIGURE 19

Throughout the rest of January and the first of February 1970, enemy pressure increased along the northern and eastern perimeters of the PDJ. Several RLG counteroffensives were aborted when Vang Pao was forced to divert his troops to counter enemy attacks elsewhere. In the southeast, along the Nam Xan trail structure, nearly all of the friendly outposts fell without a fight. The enemy was not required to concentrate attack forces and tactical air did not have suitable targets to strike. The final outpost was abandoned on 21 January, leaving the NVA 312th Division a clear path, except for air attacks, to Xieng Khouangville.

Box-Score Targeting

As intelligence reports indicated the enemy was beginning to move in force, USAF adapted to the new situation by once again modifying its targeting concept. Although 7AF/13AF-fragged logistic targets were still to be hit, the emphasis was now placed on target boxes--free strike areas validated by the Embassy for all-weather and night strikes without FAC control. This program was called "Box-Score" targeting. Combined intelligence reports indicated large troop concentrations existed within these areas. CAS, AIRA, and 7AF/13AF DC requested assistance of the DI "to start looking for people--enemy headquarters, staging areas, and the like."^{12/}

The first two boxes were validated and approved on 21 January--one in the Phou Nok Kok area, the other farther south.^{13/} Flights ranging in size from four to eight ships were fragged each day into these boxes. On 29 January, nine additional areas were authorized and the targeting shop at 7AF/13AF, newly strengthened by additional photo interpreters on loan from the 432d Tactical

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Reconnaissance Wing (TRW), began identifying sub-boxes for more precise targeting.^{14/} During periods of bad weather, the strikes were made either by long-range navigation (LORAN) or radar (COMMANDO NAIL) delivery tactics, and on a few occasions, flights even bombed on a tactical air navigation (TACAN) fix.

LORAN was the most dependable method, with a circular error probable (CEP) of 500 feet,^{15/} but only one squadron of Ubon-based F-4Ds was configured with the system. The remaining F-4Ds in Thailand could drop by COMMANDO NAIL (CN) tactics, if the crews were CN qualified. And the F-105s had only limited all-weather delivery capability. Consequently, the 7AF frag shop had difficulty in assigning the properly configured and crew-qualified aircraft to the alternate Box-Score target. By 11 February, F-105s were flying formation with an F-4D LORAN pathfinder and dropping on his command.^{16/}

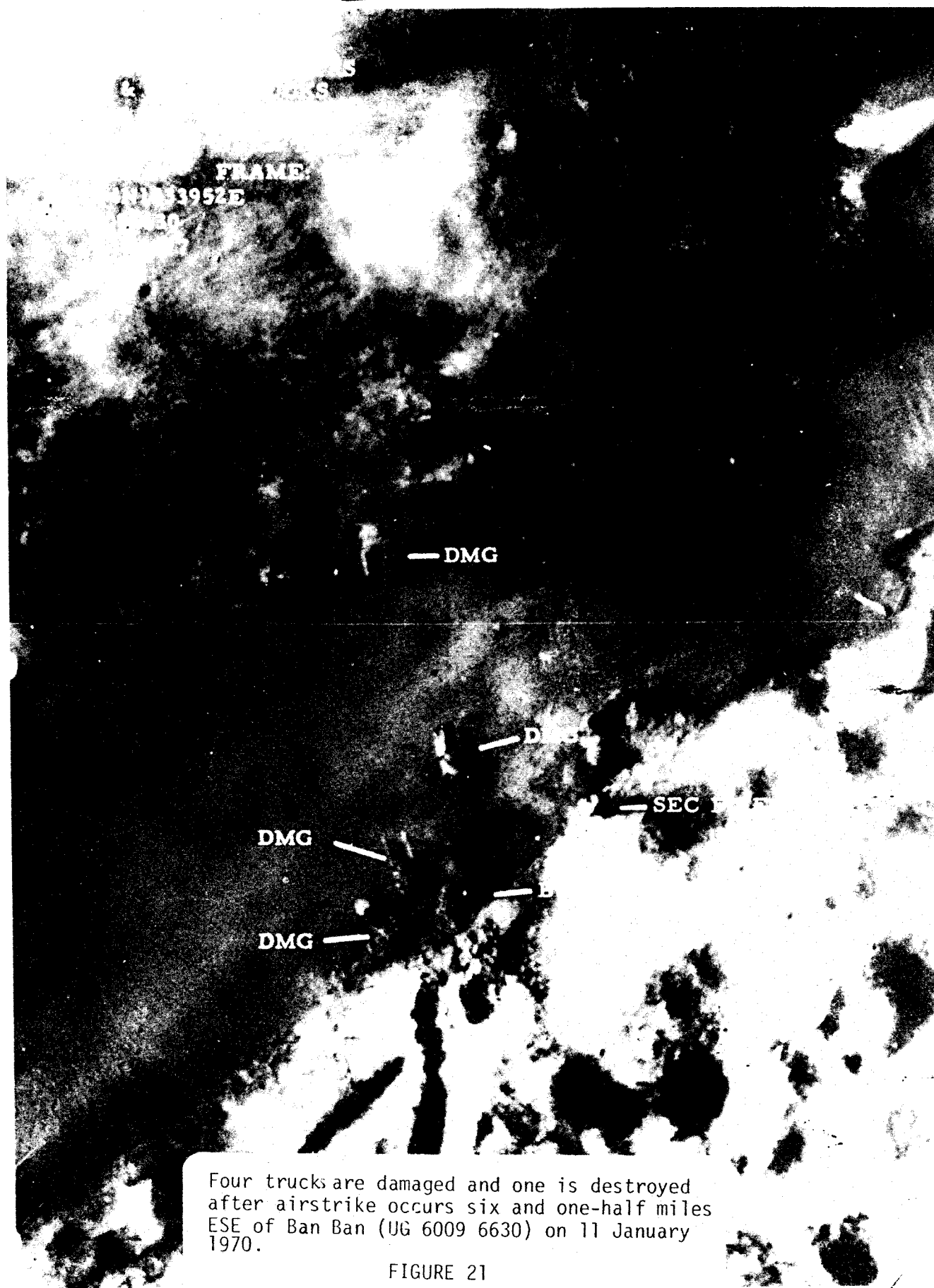
BDA was difficult to record, usually because of weather conditions. Box-Score Area 1, struck on 5, 6, and 7 February by a total of 37 COMMANDO NAIL and 4 LORAN strikes, yielded Results-Not-Observed (RNO) reports for all of the 112 tons of ordnance delivered. The situation was slightly better in boxes A, B, C, and D, struck from 2-8 February by 39 LORAN and 37 CN sorties. For the 11 sorties which could observe BDA through the weather, there were 20 secondary fires and 6 secondary explosions.^{17/} Although USAF did possess a method for bombing in adverse conditions, no all-weather BDA recorders had yet been devised. With the introduction of this all-weather capability, the number of sorties diverted from BARREL ROLL to STEEL TIGER for weather conditions gradually diminished.

The best BDA came from ground follow-up reports. After one strike, CAS



Enemy supplies burning on ground after
airstrike against Ban Ban Storage Com-
plex on 19 February 1970.

FIGURE 20



Four trucks are damaged and one is destroyed
after airstrike occurs six and one-half miles
ESE of Ban Ban (UG 6009 6630) on 11 January
1970.

FIGURE 21

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reported that a large enemy force had been routed and that "there were people screaming and running out of the area."^{18/} On another occasion, SGU and ADC ground observers reported:^{19/}

"Strikes against the major enemy staging areas along the Nam Houn River inflicted heavy casualties on an NVA force believed to be regimental size or larger. SGU and ADC units stationed around the target box reported between 11 and 15 large secondary explosions, 8 to 10 large secondary fires which burned for three hours or more, and continuing small secondaries throughout the night of 23 January. In the early hours of 24 January, an SGU patrol observed a large number of NVA moving northeast out of the target box, carrying wounded whose screams and moans lasted for the entire 30 minutes that it took the column to pass the patrol."

Although for a while RNO conditions prevailed, pilots of the 555th Tactical Fighter Squadron (TFS) were said to be "amazed at the results," according to 7AF/13AF Director of Intelligence."^{20/} During the first few days of February 1970, reports reached 7AF/13AF DC stating:^{21/}

"The 316th NVA forward headquarters was in the first box. Said CAS, 'It was a typical NVA tactic to move their troops from the main headquarters out into the field, set up a forward headquarters, assemble their troops, and launch an assault. Now we have reports of hundreds and hundreds of wounded, and according to 7AF/13AF DI, the forward headquarters has been moved back.' He says: they traced them all the way."

Ground action increased during the first few days of February, but there were still differences of opinion between planning elements as to which method and area of targeting would hurt the enemy most. AIRA, citing the lack of positive results from the Box-Score targets, opted for more divers into MR I, while CAS, siding with 7AF/13AF wanted all available strikes to remain in MR II.^{22/}

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Agreement was reached and the targeting priority spelled out. The precedence was to continue as before:^{23/}

1. VFR in MR II.
2. All-weather (LORAN, CN) in MR II.
3. Raven control in MR I.
4. ABCCC diverts to STEEL TIGER or return to base.

The intelligence estimates as well as the targeting concepts varied considerably during the relatively quiet period before the middle of January, but evaluation of the overall results was difficult. Although he was not "impressed with the boxes" because he had "seen only two reports of BDA since they started," an attache summed up the general feeling as of all February: "I can't argue with the CAS logic that the PDJ is still held. I'm just not sure."^{24/}

Matters still remaining unresolved early in February 1970 were command and control, and the establishment of a Joint Operations Center (JOC) which could control all airstrikes while at the same time effecting liaison and being responsive to General Vang Pao. Although there was an embryonic RLAF Combined Operations Center (COC) operating at Vientiane, it was not capable of handling the USAF air effort. According to the 7AF/13AF VDC, if a JOC were to be established in-country, "it should be at 20A (Long Tieng), where the Ravens were and where the briefing and debriefing take place."^{25/} AIRA agreed but added that "the problem is the CAS maximum U.S. personnel limit (20 men). They hold us to it, except for emergencies such as the Muong Soui evacuation."^{26/} The

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Senior Air Attache summarized the need for more centralized command and control:

"It's needed. There has been a growing concern over utilization of resources. However, as long as USAF is not officially involved in the war, it can say that it hadn't really lost it. Regarding the JOC at 20A, I'd personally like to see a USAF operations man there, but it's impossible. CAS controls everything completely. What we really need is a planning team with all agencies represented."

On 11 February, with indications that the enemy was again preparing to mount his long expected offensive (tanks had been spotted along Route 7), members of the BARREL ROLL Working Group reflected the growing pressure and substantial frustration experienced by all. The Senior Air Attache, speaking at the meeting, said:

"Let's just suppose it did happen--that everything's being hit at once. How would we react? Is there a plan? There have been probes very close to Muong Soui and Long Tieng--now why are they there? It's something to think about. Who's right and who's wrong? How would we react?"

Intelligence also had some questions: "What do we do if a big convoy comes down Route 7 at night? Can we get up there and do the job at night? Could we interdict Route 7 and bottle them up till morning?"

CAS commented that there was now a larger number of ground FAGs available and that they were "the key to night support."^{28/} During the next two days, supported by a column consisting of tanks, armored personnel carriers (APCs), an estimated 70 trucks, helicopters, and a regimental-size force moving down Route 7 toward Nong Pet, the enemy finally began his dry season offensive.

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Xieng Khouang (L-22)

The convoy reached the critical junction of Routes 7/71 near Nong Pet on 12 February, and the next day, eight strategic RLG hilltop positions fell to the NVA/PL. These attacks coincided with abnormally bad weather throughout MR II, which reduced air operations. Throughout February, only 13 days had ceilings as high as 5,000 feet and visibility as high as 5 miles. RLAF T-28s tried to support the positions but were unable to fire on the attackers. After loss of the junction, Vang Pao ordered his forces to withdraw to a defensive line which ran northwest to southeast across the PDJ, from Phou Keng in the west, through Xieng Khouang Airfield to Xieng Khouangville in the east.

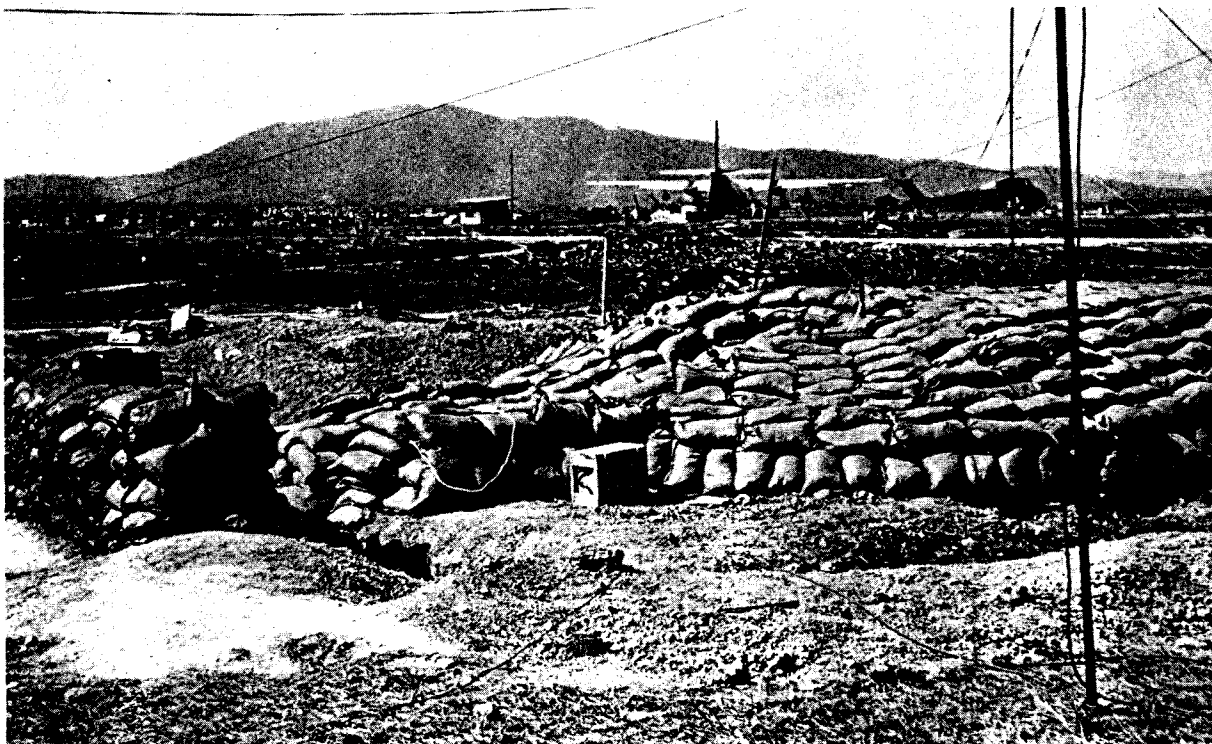
A CAS comment on this decision to withdraw suggested disappointment: ^{29/}

"It is not yet known what impelled Vang Pao to decide on this withdrawal at this time. Although his troops have been under heavy enemy pressure recently, they have defended themselves well and their casualties have not been heavy, whereas the enemy has taken heavy losses."

After loss of the junction occurred, an AIRA estimate of the situation ^{30/} stated:

"It would appear that the long talked of enemy dry season offensive is picking up speed, and we should expect increased activity, especially if the weather continues to harass air-strikes. The friendly forces will be hard put to hold the positions they now occupy. The importance of tactical air-power in this operation is evident. The RLG has been extremely resourceful, diligent, and fortunate to hold the ABOUT FACE area this far into the dry season. They must now attempt to forestall the enemy as long as possible and give ground grudgingly until the far distant rainy season should bring some relief from the enemy's ability to move and resupply."

Nearly all of Vang Pao's forces which had retreated from the eastern rim of the



Lima Site 22 (Xieng Khouang)-February 1970
FIGURE 22

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PDJ assembled at Xieng Khouang; it soon had a population of 1,300--half FAN/FAR and half SGUs.^{31/}

While the RLG forces were regrouping within the PDJ, the Embassy, in order to increase USAF flexibility in striking the enemy supply routes, created a Special Operating Area (SOA) along Route 7 from Ban Ban eastward to the edge of the ten-mile Buffer Zone at the NVN Border. All targets within this six-kilometer-wide area could be struck without FAC control or further Embassy validation.^{32/}

At the same time, the air evacuation of civilians from the PDJ continued. The enemy buildup south of the PDJ had led to fears that an attack might come on Lat Sen (LS-276), a major refugee center in the southern PDJ. From 4-10 February, C-123s and helicopters, supplemented by two USAF C-130s, successfully airlifted 13,200 civilians from the PDJ to hastily set up camps near Vientiane and Paksane. Accomplished "with all the elan we normally associate with such humanitarian efforts," according to the Ambassador to Laos, this evacuation deprived the advancing NVA/PL forces of their potential labor force. When it was all over, a 20th Special Operations Squadron (SOS) officer commented that the total cost, taking into account all time flown, had been about \$28,140, or \$2.13 per refugee.^{33/}

The main enemy thrust came against the center of the new defensive line at Xieng Khouang. On 11 February, the ground FAG (Hilltop) reported an enemy helicopter over the site but it disappeared before air could strike it. During the early morning darkness the next day, with a heavy ground fog, a ceiling below 1,000 feet, and visibility less than one mile, three of the seven enemy

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companies in the area struck the camp under cover of 120-mm mortar fire.^{34/}
The FAG reported the attack to the ABCCC C-130 (Alleycat) overhead, and two Blindbat night FACs and three Spooky AC-47 gunships (one Lao) were sent to the scene. The gunships remained over the site throughout the attack, but low clouds prevented them from firing on the enemy. They did drop flares over the contested area and this helped the government defenders stop the enemy at the perimeter. Nearly all of the enemy were about 17 years old.^{35/} A host of enemy equipment was captured, including a large number of AK-47s, hand grenades, blocks of TNT, and radios.^{36/}

The attack on L-22 brought an immediate response from Seventh Air Force. As the enemy offensive opened and targets became available, increased sorties were allocated to BARREL ROLL. The day after the attack on L-22, the number of USAF and RLAF sorties took a dramatic jump. From a daily average of 101 sorties scheduled the previous week, USAF flew 180 sorties (mostly into MR II) on 13 February, and RLAF sorties increased from 90 to 141 on the same day (App. III). This higher sortie rate remained in effect until the end of the month. At the same time, a noticeable shift occurred in the targets to which these sorties were fraggged as more and more went to the Raven FACs for use against troops-in-contact. During the second week in February, before the enemy advance, an average of 65 sorties per day was scheduled for Raven control. On 15 February, the number jumped to 96; this figure remained during the critical third week of the month.

The enemy was definitely on the Plain of Jars in strength. On the night of 15-16 February, Spooky support to friendly forces accounted for 174 confirmed

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enemy killed by air. The bodies were found the next morning by an SGU patrol. According to the Ambassador to Laos, the AC-47 had probably "decimated an entire unit."^{37/}

In addition to the sortie increase, AC-119K "Stingers" were introduced into BARREL ROLL. On 13 February, a temporary Forward Operating Location (FOL) was established at Udorn. Three gunships were assigned, two of which were to fly each night. At first, attached only for 14 days TDY, the AC-119Ks had a primary mission of armed reconnaissance along Routes 7 and 61. Using the Night Observation Device (NOD), capable of a 40,000/1 light intensification, the Stinger could work with a ground FAG, whereas a Spooky could only drop flares. "Actually," said a Stinger navigator, "we prefer not to use flares as the Spookies have to, although if the FAG asks us to drop one, we will."^{38/}

On 16 February, a briefing team arrived at Udorn with three beacons and some IR ground tapes (these reflect IR energy absorbed from the sun and can be used for "blind bombing"), which were immediately taken to Van Pao's headquarters. The equipment was to be installed at Xieng Khouangville and L-22,^{39/} but as events turned out, this capability was never used in defense of the PDJ. In late February, according to CAS, the beacons were "still in our safe at 20A."^{40/}

The enemy attempted another ground assault on L-22 before sunrise on 18 February with a 200-man force, spearheaded by four PT-76 tanks. A dense ground fog reduced visibility to less than one mile. USAF and RLAF gunships had been on station throughout the night, but once again were prevented by the weather from using their guns when the attack came. As on 12 February, the

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aircraft provided flare support and the RLG defenders turned back the attack.^{41/}
The enemy lost 51 men in the assault, and two of his tanks were destroyed and one limped damaged from the scene. Throughout the day of the 18th, aircraft struck enemy positions around L-22, and Hilltop (FAG) reported 150 NVA soldiers killed through a combination of airstrikes and ground firing. On the same day (18 February), 20 sorties were diverted from STEEL TIGER to BARREL ROLL, as USAF flew an all-time high of 224 sorties in BARREL ROLL.^{42/}

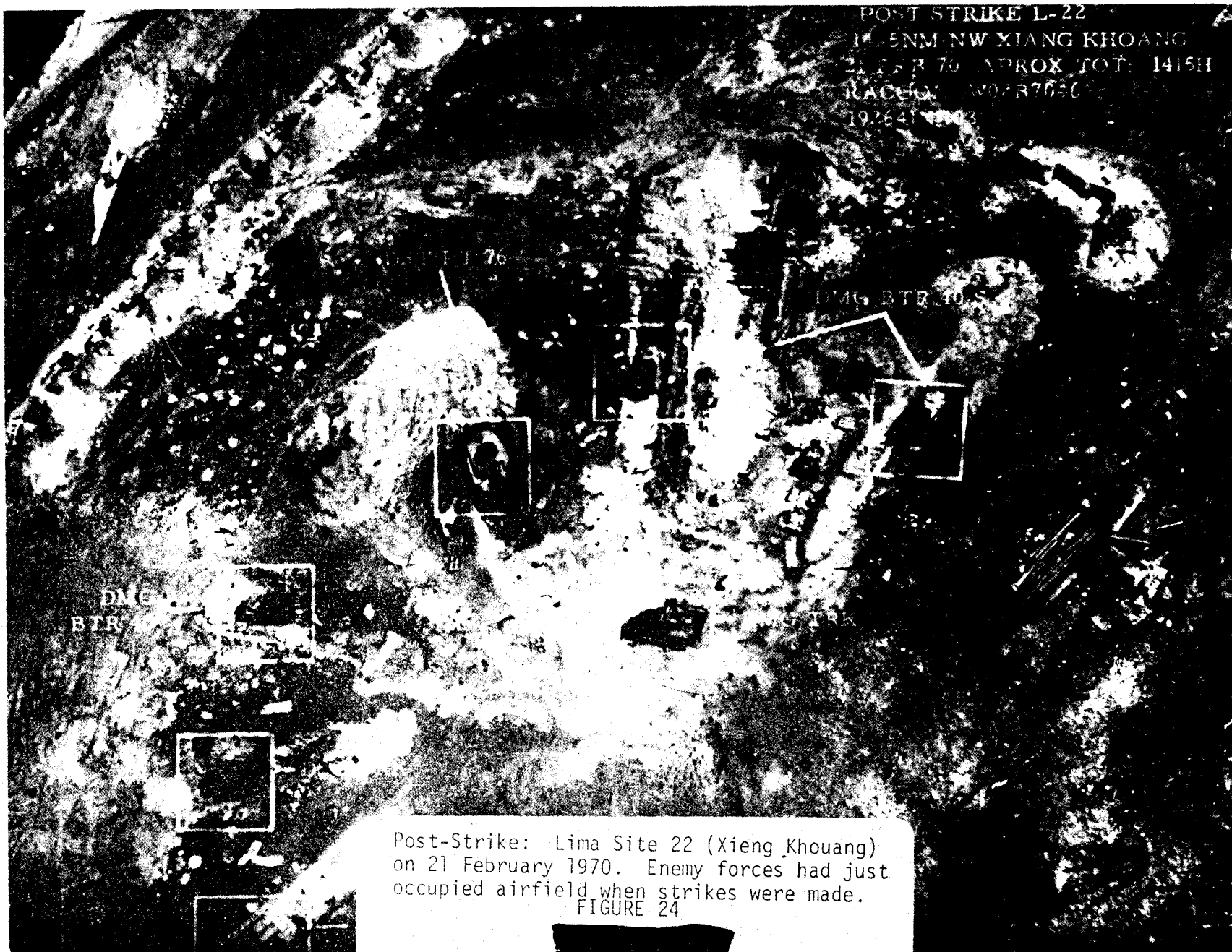
At midnight on 19-20 February, the government unit at L-22 spotted troops and six enemy tanks moving about one mile northeast of the airfield perimeter. Hilltop reported this movement to Alleycat, and air support kept the enemy from attacking. After two hours of airstrikes, the enemy force had maneuvered into a position one-half mile west of the airfield. Two more hours of airstrikes forced him to pull back and no major attack came that night.^{43/}

Just after sunset the next evening (20 February), the enemy began to mortar the site. An unconfirmed report stated a helicopter was directing the fire into the camp. From 1900 until 0145 hours, sporadic fighting took place between the FAR unit located at an outpost one-half mile north of the field and an enemy force of about 50 men. Gunships fired around the FAR outpost, and whenever aircraft were in the area, the fighting subsided. The enemy broke contact during the strikes and tried to move toward the camp from a different direction.^{44/} The ground attack finally came at 0145 hours, supported by tanks, ZPUs, and 23-mm AAA, at a time when the Spooky gunships had returned to Udorn for fuel. At the sight of the tanks, the FAR soldiers in the northern outpost panicked and ran back into the main camp, which was thrown into confusion. Within 15 minutes of



Lima Site 22 (Xieng Khouang) under
air attack after enemy capture on
21 February 1970.

FIGURE 23



Post-Strike: Lima Site 22 (Xieng Khouang)
on 21 February 1970. Enemy forces had just
occupied airfield when strikes were made.
FIGURE 24

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the initial assault, the government forces were evacuating the camp, just as the Spooky returned and began receiving automatic weapon and antiaircraft fire from positions near the camp perimeter.^{45/} Radio contact was lost with Hilltop for 20 minutes, and when it resumed (0215 hours), the FAG reported that the field had been overrun. The quick departure of the friendly troops from Xieng Khouang allowed the enemy to take it without massing, thereby depriving airpower of suitable targets.

Reaction to the unexpectedly rapid fall of the Xieng Khouang Airfield followed predictable lines among the various agencies which had hoped it could hold out longer. According to a Senior CAS official:^{46/}

"Lima 22 was indefensible. It's surrounded by hills-- resembles Dien Bien Phu.... It wasn't that important. It was a supply center. It had a runway. But it wasn't important otherwise."

Nevertheless his disappointment showed through:

"We had a large defense plan which called for a fighting withdrawal, to hit them with air, then pull out. We mistakenly thought we could teach them defensive tactics overnight. But the idea of a phased withdrawal was alien to them."

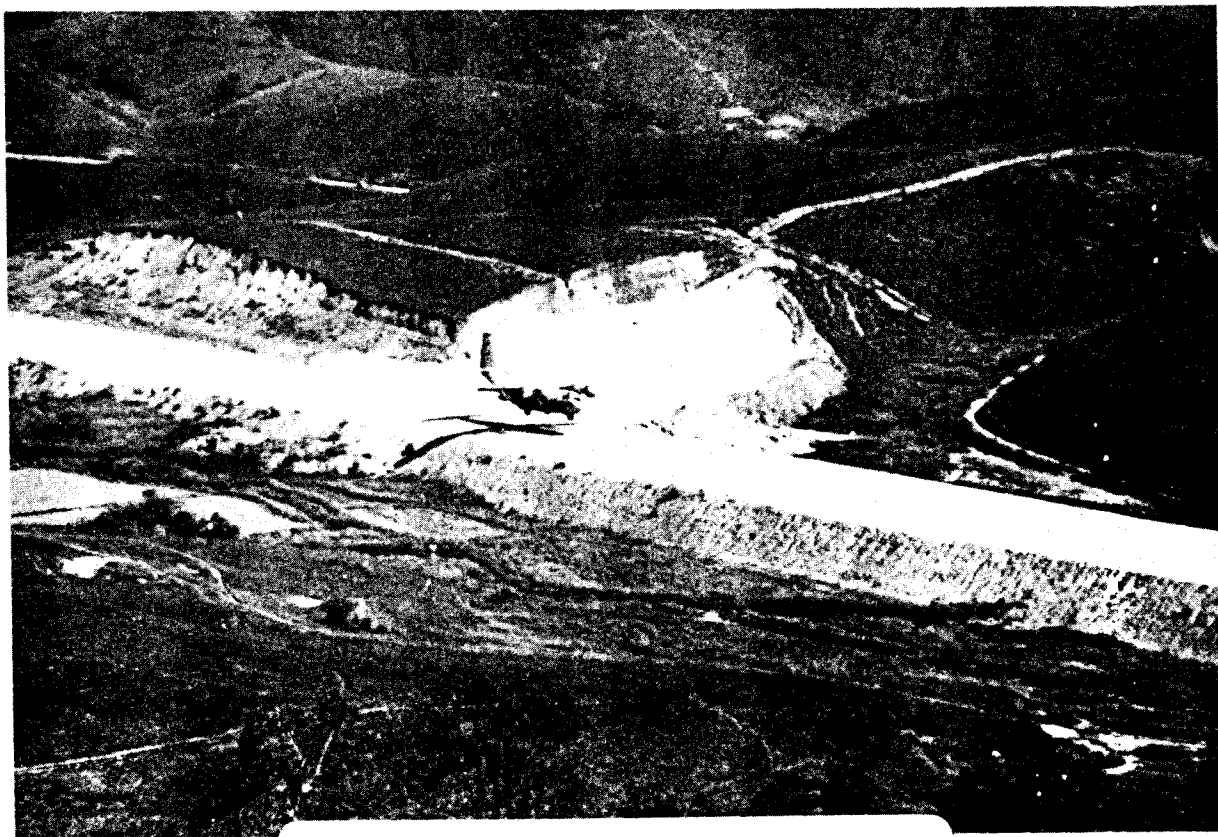
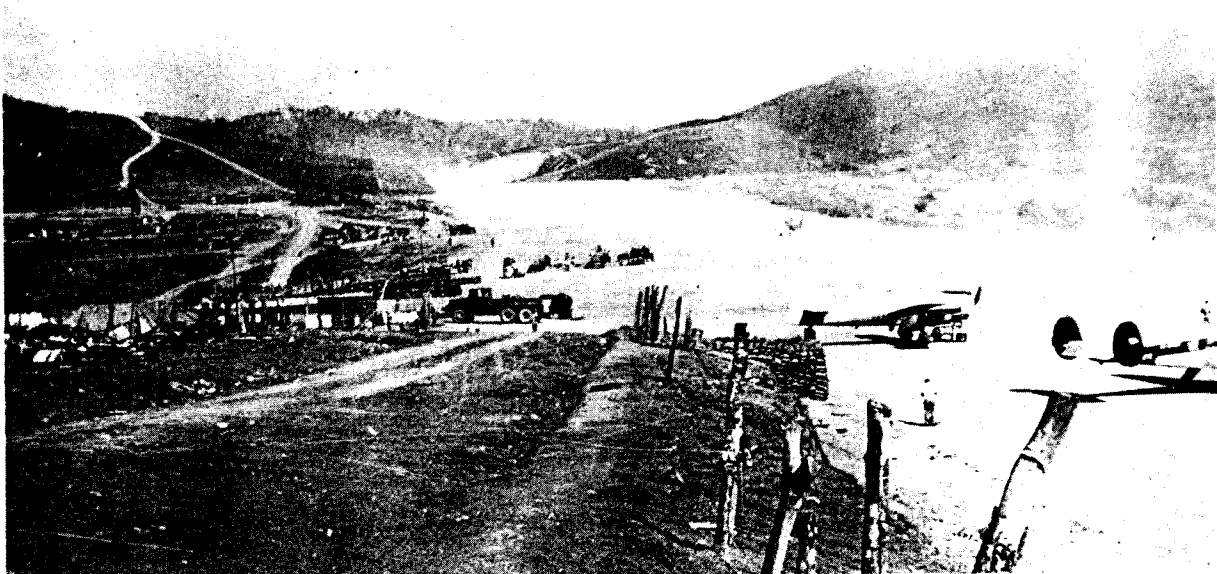
It was the view of the air attaches in Vientiane that "the government forces wisely chose to withdraw and lose terrain in favor of the more precious commodity of fighting troops."^{47/} To 7AF/13AF, understandably disappointed with the outcome, it appeared different: "I don't see how we can help them defend a position," the Deputy Commander said that morning, "if they don't stand and fight."^{48/}

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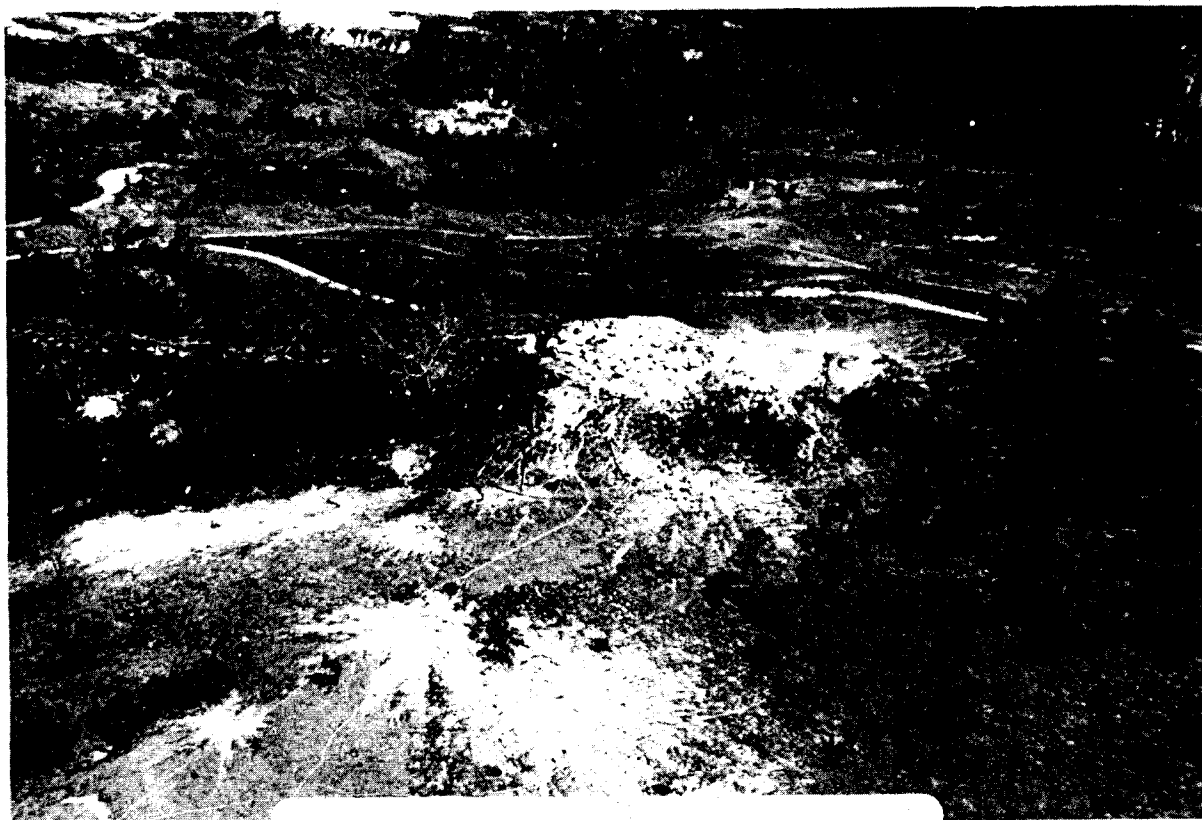
Muong Soui (L-108)

With the loss of L-22, the Plain of Jars was gone. By the evening of 21 February, all government troops had fled. The next night, General Vang Pao decided Xieng Khouangville was untenable and ordered the 1,200 soldiers there to withdraw. Equipment and supplies were airlifted out on the 23d, and by sunset the next day, the entire garrison had been evacuated to the south. The eastern flank of the new defensive line was established in the mountains south-east of the PDJ.^{49/} The soldiers who fled from L-22 filtered in small units into the numerous sites southeast and west of the plain. The western anchor of the new line was at Muong Soui (L-108),^{50/} whose capture by NVA forces the preceding June had touched off Operation ABOUT FACE.

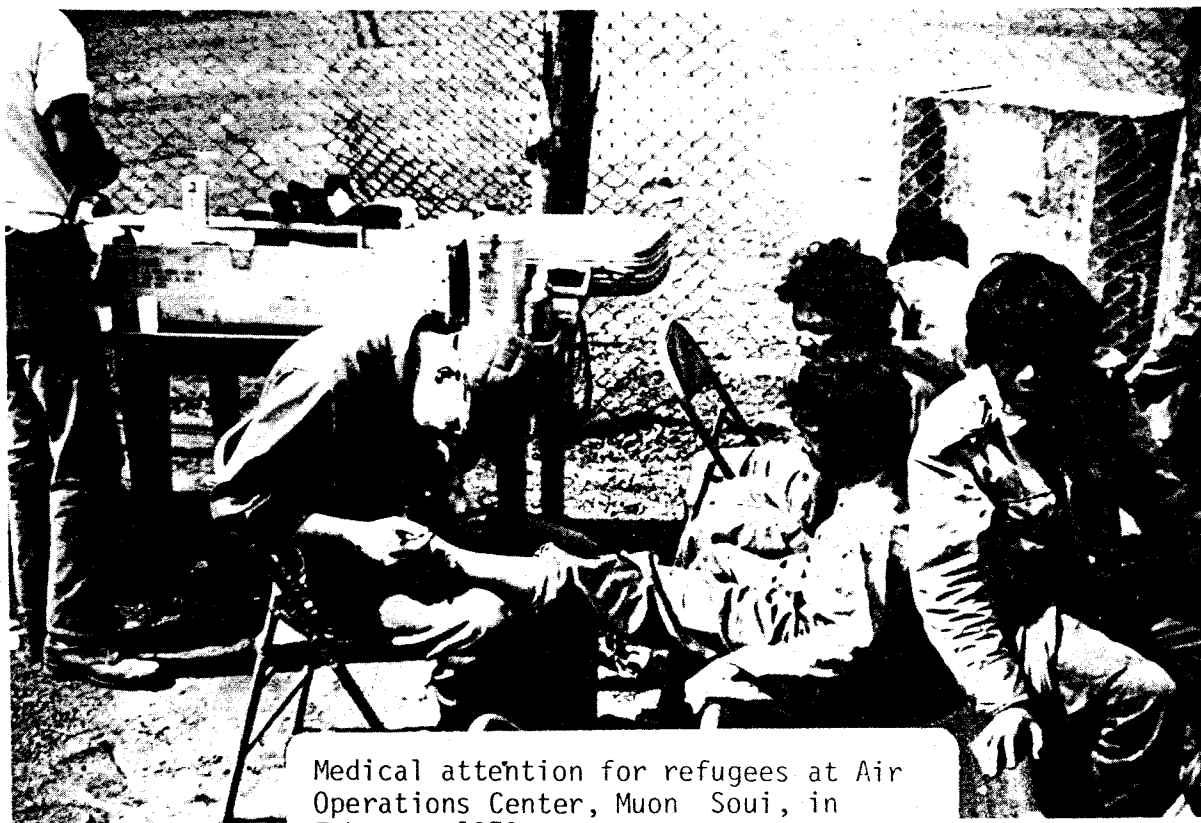
Muong Soui sat astride the only westward road out of the PDJ and was the main government position between the plain and Route 13, which ran between the two capitals of Vientiane and Luang Prabang. The airstrip at Muong Soui had been improved early in January 1970, and on 14 February, the RLAF began using it as a forward operating base for the T-28s flying from Long Tieng (L-20A) and Vientiane. All air activity from the field was under supervision of the American Commander of the Air Operations Center (AOC). Each day he and his support crews were flown in to man the site. At night, only local security forces remained, consisting of 120 ADC soldiers deployed in five outposts around the airfield. The ADC unit had limited communication with a forward position at Phou Kout, 10 miles to the east, and with Long Tieng.^{51/} Since the beginning of flying operations in January, the daily number of T-28 sorties rose gradually to a daily average of more than 30. When L-22 became unsafe for



Muong Soui - February 1970.
FIGURE 25



Auto Defense de Choc position near
Muong Soui in February 1970.



Medical attention for refugees at Air
Operations Center, Muon Soui, in
February 1970.

FIGURE 26

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Raven operations after the attack on 12 February, the Ravens used Muong Soui for recycling,^{52/} and the number of sorties flown from the field reached 53 a day.^{53/}

Some of the difficulties and frustrations of supporting guerrilla forces with airpower were evident in the events that preceded the NVA capture of Muong Soui on 25 February. When L-22 was attacked the second time on 18 February, refugees, carrying personal possessions and driving cattle before them, began flowing through Muong Soui. With them were about 25 friendly soldiers who did not join the ADC troops but instead bought food and cattle and departed that afternoon. The number of refugees increased on 19 February and some of the Muong Soui villagers began leaving. Fifty Forces Armee Royale (FAR) soldiers trickled in from L-22 during the day with the news that the enemy was approaching Phou Kout. On the following morning, it was discovered that these FAR troops had left during the night and headed west toward Route 13. During the day, 150 -- refugees and another 50 newly arrived FAR soldiers congregated on the runway, seeking to be evacuated by air. In the afternoon, the local natives who worked at the bomb dump quit their jobs to join the increasing exodus from Muong Soui.

The next morning (20 February), the T-28s from Vientiane failed to show up. More FAR soldiers arrived over the weekend and by Sunday (22 February), they numbered 200, armed but without food. CAS believed that these troops, together with the ADC, could defend the airfield, and in an attempt to keep them there, the AOC Commander borrowed rice from the ADC units and set up a cooking area. The Air Attache at Vientiane advised them he was sending an air-conditioned house trailer "to boost the morale and show our intention to remain at L-108."^{54/}

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Enemy forces were reported at Phou Kout. Although the T-28s did come on Sunday, they flew only a few missions against the reported troops since there was no ground FAG to direct them and no control center (lost with L-22). About 200 FAR soldiers were still at Muong Soui, but they were totally disorganized and did not take up defensive positions. No attempt was made to reorganize them or to provide other forces for the site. By Monday morning, two-thirds of the troops had disappeared and the 50 who had remained overnight were gone by noon. The defense of Muong Soui was in the hands of 120 ADC troops, eight American Advisors, and 24 RLAF mechanics armed with carbines but no magazines. On the same day, a FAG (Jackrabbit) was assigned to the ADC unit. A FAC flew over the area east of Muong Soui but, as had happened so often, saw no sign of the enemy.

While en route to Muong Soui by air the next morning (24 February), the AOC Commander learned that an aircraft going into L-108 had received ground fire from the east end of the runway and that the site was insecure. When over the site, he observed several villages burning two miles east of Muong Soui (RLAF T-28s had bombed them). The ADC soldiers were still in their camps walking around casually, and the situation seemed calm as he returned to Vientiane, but when he flew over the airfield the next morning, the bomb dump was burning and there was no sign of activity. Muong Soui was deserted. It had fallen without a fight and without the enemy being forced to concentrate. Once again airpower found itself without a target. This was the AOC Commander's final comment: "From 53 missions a day to this in four short days."^{55/}

Except for the weather, which was good on 24 and 25 February, the same

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factors had contributed to the loss of L-108 that caused earlier losses in the campaign. Underlying the other factors was the command and control problem. The RLG forces were disorganized and did not have the heart for a fight. The RLAF lacked central direction. The regular enemy forces, on the other hand, seemed not to have that problem: ^{56/}

"They move in small units and rendezvous at preselected points at preselected times. It's a tremendous exercise in command and control if you look at the difficulties involved. They don't get any concentration until the last minute, of course, because of airpower, but they pick the right time of year. They don't use roads. They move through the trees. And airpower is limited by what you can see."

And very little was seen. During the critical week in February when the Raven FACs were totally committed to directing strikes, two OV-10 Bronco FAC aircraft ^{57/} were introduced into BARREL ROLL to perform visual reconnaissance. The combination of the enemy tactic of moving at night and off the roads with fog-caused low visibility every morning limited what these aircraft could do. Even when the weather was good, the morning haze reduced the working day of reconnaissance aircraft to several hours each afternoon.

The Vang Pao Line

With the loss of Muong Soui on 25 February 1970, the military situation had come full circle, and both sides were geographically back where they had been at the start of Operation ABOUT FACE the preceding June. But in March 1970, there was an important difference. The enemy's timetable had been set back nine months by his retreat and counteroffensive. During this time, he had suffered heavy losses in both personnel and materiel. Added to the large number of

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soldiers he lost during the retreat before 1 November 1969 were another estimated 2,000 soldiers who were killed by air alone during the last two months of the year.^{58/} Although he had taken the PDJ, the enemy, fearing airstrikes, did not occupy it. By evacuating the refugees from the plain, Vang Pao had deprived the NVA of a major labor force. Further, the plain was devoid of the supply caches which the enemy had built over the years.

Vang Pao's immediate concern was to defend Long Tieng, and he deployed his troops in a string of hilltop sites (the Vang Pao Line) which formed a crescent around the southwest corner of the plain between the PDJ and Long Tieng. Loss of the PDJ meant for USAF/RLG forfeiture of a major intelligence source; ground teams and FAGs could no longer observe enemy movements and direct aircraft within the plain. Since the enemy moved in small units under cover of trees and darkness, he could be located with certainty only when he was in contact with friendly forces. In the absence of such contact during the period immediately following the loss of Muong Soui, USAF concentrated on interdiction. CAS agreed^{59/} that "USAF could do best by trying to hang onto the interdiction points." Strike aircraft hit segments of Route 7 between Ban Ban and Nong Pet daily and, after sunset each day, seeded them with area denial and antipersonnel mines to restrict activities of the road repair crews. To improve the night interdiction efforts, the AC-130 "Spectres" were returned to BARREL ROLL in mid-March (they had not flown on Route 7 since 17 February). Instead of one Spectre per night, two or three were scheduled, and the increase in trucks destroyed and damaged attested to their usefulness.



PT-76 tank damaged by airstrikes near
Ban Naxa in Plain of Jars on 27 February
1970.

FIGURE 28

The AC-119s too became more and more effective as crews gained familiarity with the BARREL ROLL environment, a distinct change from STEEL TIGER. By the time they had completed their first 100 combat sorties, the Stingers had sighted 241 trucks, destroyed 71, and damaged 114. "We get to shoot more rounds per truck here than in STEEL TIGER," a crew-member attested, because it's a more permissive environment." He added, "The trucks are harder to hit, however, because they're on and off the roads more."^{60/} On 12 March, as an example, AC-119 CLARE destroyed seven trucks with 12 secondary fires and explosions.^{61/} At first, flying one third of their sorties in troop support, by late March the Stingers were flying two-thirds of their sorties for troops-in-contact situations.^{62/} As a result, their TDY was extended "until the onset of the southwest monsoon season."^{63/}

Other procedures were also changed. On 1 March 1970, the Spooky scheduling was improved when L-22 fell. From this time forward, a second AC-47 would take off from Udorn whenever the first would call "tactical," thus assuring that there would be maximum support in the event of simultaneous attacks on many sites.^{64/}

During the lull, 7AF reined back its strike force by cutting in half the daily number of sorties scheduled into Northern Laos. On 6 March, 97 sorties were planned--the first time this figure had fallen below 100 since the preceding June. A week later, General Brown, Commander, 7AF, set the daily figure at 88, but with the reservation that it could be changed by a phone call.^{65/} The need for the change was not long in coming. On 17 March, visibility along the Vang Pao Line remained at one-half mile and, as had so often been the

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case since November, the operational period for tactical aircraft was confined to only a few hours each afternoon. One enemy unit, shielded by the weather, attacked Site 72, while other enemy forces slipped past the line and appeared on the doorsteps of Sam Thong (L-20) and nearby Long Tieng (L-20A). The NVA had chosen to confront Vang Pao directly at his home base.

CHAPTER IV

STAND AT LONG TIENG - 17 MARCH TO 1 APRIL 1970

As the NVA forces moved toward the Long Tieng/Sam Thong Valley, there was little cause for optimism. According to the 7AF Commander, Gen. George S. Brown, command and control in the BARREL ROLL area was weak. He commented, "We are still not as effective in putting ordnance on target in conditions of weather as we should be." Better targeting was needed from CAS, AIRA, and 7AF/13AF: "We ask them to give us firm targets which they can't always do, and they can't control all the sorties they get." The General continued: "Our big problem in BARREL ROLL is the weather."^{1/}

At Long Tieng, tentative solutions to these problems emerged. Vang Pao rallied his dispersed troops, and with help from other Military Regions, they stood and fought, forcing the enemy to mass and create targets for airstrikes. High level meetings and coordination of effort among U.S. agencies, Vang Pao, and the governments of Laos and Thailand produced a cohesion of purpose and a unity of intent. A combination of determined ground forces and airstrikes, aided by a favorable break in the weather, stabilized what had been a steadily deteriorating situation.

At first, the outlook seemed bleak. The best prevailing visibility in all of BARREL ROLL on 17 March 1970 was no more than two miles with one-half mile or less in many areas.^{2/} The haze layer, fed by many fires on the ridges around the Long Tieng Valley, topped at 10,000-11,000 feet. That day, noting the enemy "had used several weeks to ferry supplies across the plain and stockpile materials," a CAS Senior Official stated that "the enemy had men and

[REDACTED]

supplies in place for a major offensive southwest into the Meo heartland." He continued: ^{3/}

"The enemy's movements and attacks of mid-March make his intentions for the 1970 dry season quite clear. The North Vietnamese have sent two divisions to drive Military Region II Commander, Maj. Gen. Vang Pao, and his irregular army from Northeast Laos.... Military Region II forces are understrength and fatigued after seven months of steady fighting, ...and there are no reserves.... The crucial factor is whether the present emergency can arouse a sufficient sense of urgency in the commanders of Military Regions III, IV, and V to make them see beyond their own immediate concerns. There is no precedent for this, but it is always possible."

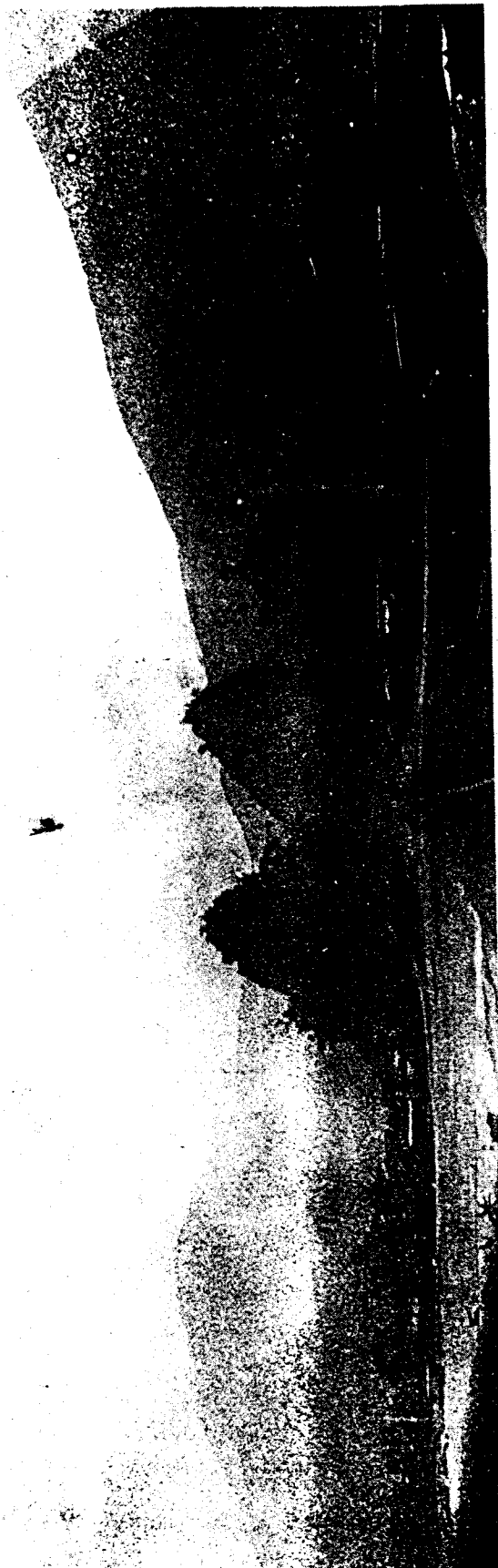
The Vang Pao Line had not stopped the enemy's advance. The Lima sites along the line were abandoned in rapid succession, often without a fight. Since the enemy had not been forced to concentrate to take the sites, tac air had little opportunity to provide close support. Weather, according to the AIRA, was "almost impossible for air operations." "One of the major dangers," AIRA believed, was "a mid-air collision around Long Tieng." ^{4/} Anticipating the worst, both AIRA and CAS had drawn up contingency evacuation plans for U.S. personnel at Long Tieng. The AIRA presented four alternatives: ^{5/}

PLAN A. The site will be manned by 20 personnel plus one additional FAC (Normal Operations).

PLAN B. The site will be manned by 7 personnel, i.e., the AOC Commander, line chief, medic, radio operator, and 3 FACs. The other 14 personnel would shuttle back and forth for daytime operations.

PLAN C. The site will be manned by 4 personnel, i.e., the AOC Commander, line chief, medic, and radio operator. All others would shuttle back and forth for daytime operations.

PLAN D. Complete evacuation of the site.



Haze appearing at Long Tieng on final
approach - 21 March 1970.
FIGURE 29

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With reports that some enemy forces had bypassed the besieged SGUs at Site 72 and were moving toward Vang Pao's headquarters, the decision was made to evacuate the USAID hospital at Sam Thong.^{6/} At 1110L on 17 March 1970, AIRA gave the order to implement Plan B at Long Tieng. The 13 Air Operations Center personnel who were to leave the site were to be "as inconspicuous as possible on departure to avoid creating undue concern" and "should bring blankets and sheets with them." Only one T-28 and two O-1s were to be left on the ground that night.^{7/} By 1300L, the AIRA evacuation was in progress.^{8/}

Caution on the part of the Americans had no visible effect. As rumors of a yet unlocated large enemy force circulated among the troops and villagers, panic began to spread. All afternoon, according to CAS, villagers streamed from the Long Tieng Valley along the trails and roads to the south. Many soldiers left their units and duty stations to evacuate their families. Even the civilian and military leaders, including General Vang Pao, were moving their families to Vientiane via aircraft.^{9/} Seeing the C-123s loading, hundreds of refugees clustered around the fences and barbed wire of the airstrip, begging for transportation. The scene was one of great confusion, as C-123s, Caribous, helicopters, O-1s, and T-28s landed and took off in the smoke and haze.

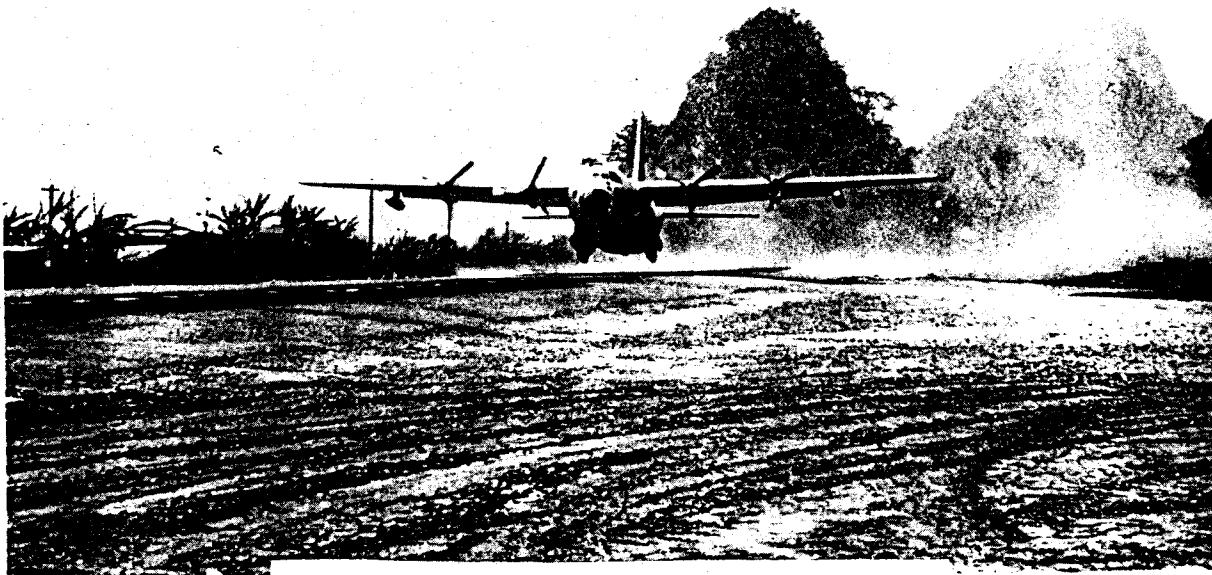
Even though it was difficult to pinpoint the enemy forces, some airstrikes were made. During one day, Raven FACs were able to work 20 USAF missions in BARREL ROLL.^{10/} Two of Vang Pao's Meo pilots managed to fly a record 31 T-28 sorties from Long Tieng, arming, taking off, delivering ordnance, and returning without seeming to leave the normal traffic pattern. Their targets were just on the other side of the ridgeline which dominates the Long Tieng

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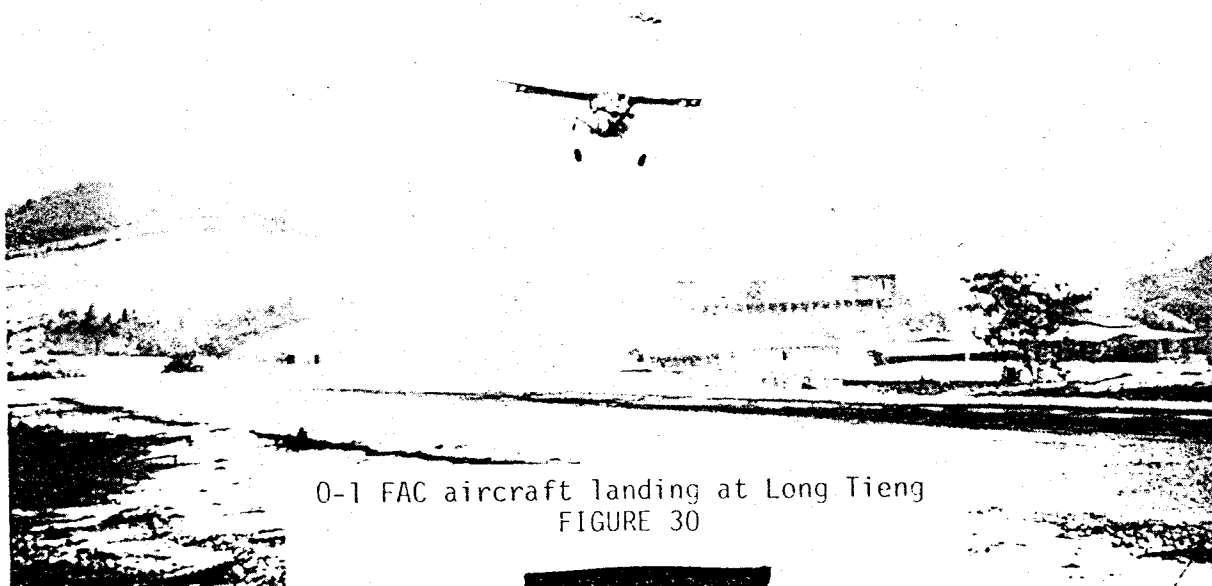
Valley, and personnel could watch from the flight line as they dropped their bombs.^{11/}

By nightfall on Tuesday, 17 March, AIRA and CAS completed the first phase of their evacuation by destroying the classified material they could not take with them. All civilians and U.S. personnel had left the village of Sam Thong. The USAID hospital had been evacuated during the day, and only a 535-man force remained, comprised of 160 guerrillas, 175 RLG troops, 100 police, and about 100 armed schoolteachers. By 2200 hours, all was quiet in the Sam Thong-Long Tieng Valley.^{12/} Remaining at Long Tieng, however, were General Vang Pao and his staff, including his Meo FAC backseaters, and six O-1s which had been left in error as AIRA personnel hastily doubled up in the two-place T-28s.^{13/}

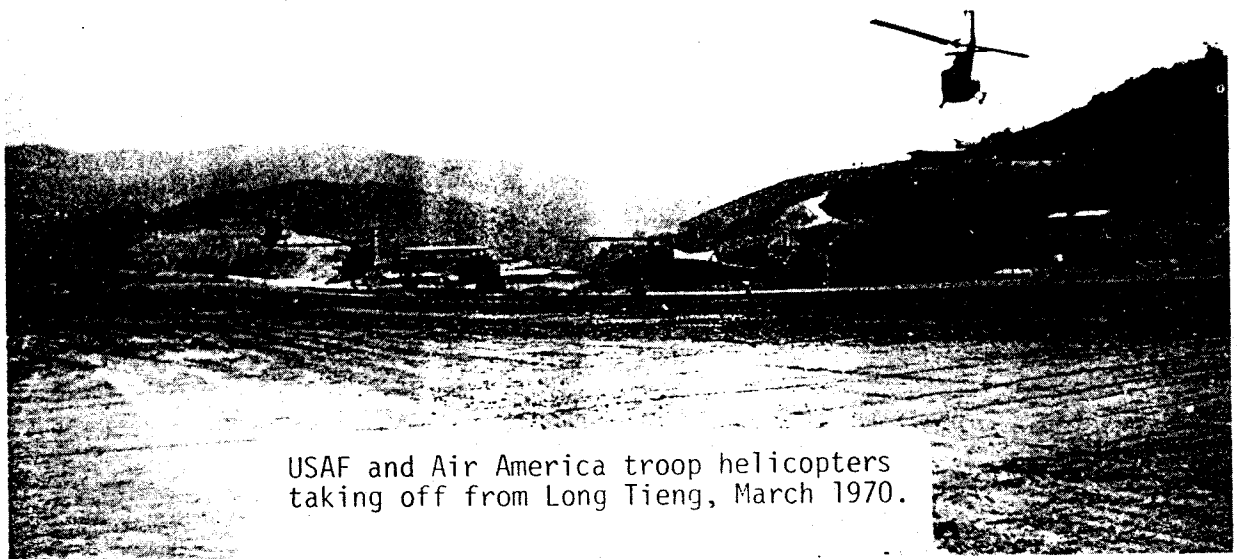
At 2300 hours on the 17th, guerrilla units between Long Tieng and Site 7: reported seeing "an extremely large number of enemy troops moving toward Long Tieng, four miles to the southeast."^{14/} Two hours later, the NVA were sighted one mile closer.^{15/} At 0215 hours, the enemy's advanced units had moved to within two miles of the valley, and fighting was in progress.^{16/} As a precautionary measure, all USAF personnel were ordered to their bunkers, where they remained until daylight of 18 March.^{17/} Except for some flare support, the weather remained unworkable, for the gunships. Throughout the night, evacuees fled south. One observer said, "Most of the people carried their belongings on their backs, and the more affluent drove jeeps as far south as possible and then began walking. The noise of howitzers firing from Long Tieng added to their fears."^{18/}



C-130 takeoff from Long Tieng - March 1970



O-1 FAC aircraft landing at Long Tieng
FIGURE 30



USAF and Air America troop helicopters
taking off from Long Tieng, March 1970.



T-28 aircraft crashed through oil drum
barrier at end of runway at Long Tieng.
(Hydraulics were lost due to battle
damage.)

FIGURE 31

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At Sam Thong, government forces reported fighting in the east side of the village at 0615 hours, and by 0700 hours on the 18th, the enemy was attacking at the west end of the airstrip. Buildings were burning, and to CAS it appeared "a major enemy attack against Sam Thong was apparently under way."^{19/} At the same time, the first of the few Raven FACs who had remained at Long Tieng became airborne.^{20/} In Vientiane, the AIRA radio log noted at 0750 hours: "Sam Thong under heavy attack--no defense between there and 20A. Preparations being made to evacuate 20A."^{21/} Ten minutes later came the request that all Raven FACs go to Long Tieng to ferry the aircraft out,^{22/} just as the Chief Raven and other AIRA personnel were preparing to go to Udorn for the weekly BARREL ROLL Planning meeting. The Chief Raven said, "Suddenly everything seemed to be going, and we were told to go to Plan D. Instead of flying south, we loaded rockets on our airplanes and headed north."^{23/}

Apprised of the deteriorating situation, General Brown responded as he had promised. That Wednesday (18 March), instead of the 91 strike sorties scheduled for BARREL ROLL, 163 were flown, but the increasing haze and smoke caused the visibility to hit a new low of less than one mile.^{24/} As a result, "airstrikes were minimal during the day. There was no real pinpointing of the enemy, and weather made area bombing the only contribution."^{25/} To intensify the problem,^{26/} the TACAN station at Long Tieng had gone off the air and was assumed overrun.

As the CAS contingent destroyed its cryptographic material and the AIRA personnel dismantled their teletype equipment, the USAF physician assigned to Long Tieng described his own problems:^{27/}

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"When I saw everyone starting to pull out, I asked Vang Pao and CAS if they wanted the hospital evacuated, too. They said, 'Yes.' I told my Meo hospital administrator to give all the patients their doses and get them ready to move. When I got to the hospital, the administrator was not there. I looked for him for three hours--then he returned. When he came back, he said, 'Family go southeast.' I asked him if he had driven his family across the mountains. At first he denied it, but finally said 'Yes.' 'OK', I said, 'Now let's take care of the patients.' There were about 80 patients, 95 percent military, of whom only two were what I would call litter cases. One was an old man whose son had brought him in to die, leaving a sack of rice for his care. We had gotten him into such good shape that he was walking around a little bit each day, and in a week or so he could have walked back to Vientiane and given his son hell. Air America gave us a 123, and we loaded all the patients into it and took them to Vientiane. We left all the medical equipment for the two Thai physicians to use."

At the Udorn BARREL ROLL meeting, a CAS official described what he thought was going on in the following terms: ^{28/}

"We've got some 6,000 troops, enemy and friendly, engaged in a major battle. We know where the enemy is. Where they're shooting from is where the enemy is. Although it may appear wasteful, what you need is 24-hour coverage of this major battle that is going on."

Chiding those who were discussing possible enemy intentions and the effects of poor weather, the CAS official concluded: "You can sit around and make all the policy in the world right now, but it's up to the guts of the fighter pilot and the guy on the ground with the rifle." ^{29/}

By 1300 hours on 18 March, "a large enemy force of unknown size" was observed to be about five kilometers northeast of Long Tieng, while from Sam Thong it was reported that "one warehouse and about half the town had been burned." ^{30/} At 1335 hours, the AOC at Long Tieng urgently requested A-1s with



Lineup of T-28 aircraft at Long Tieng -
March 1970.

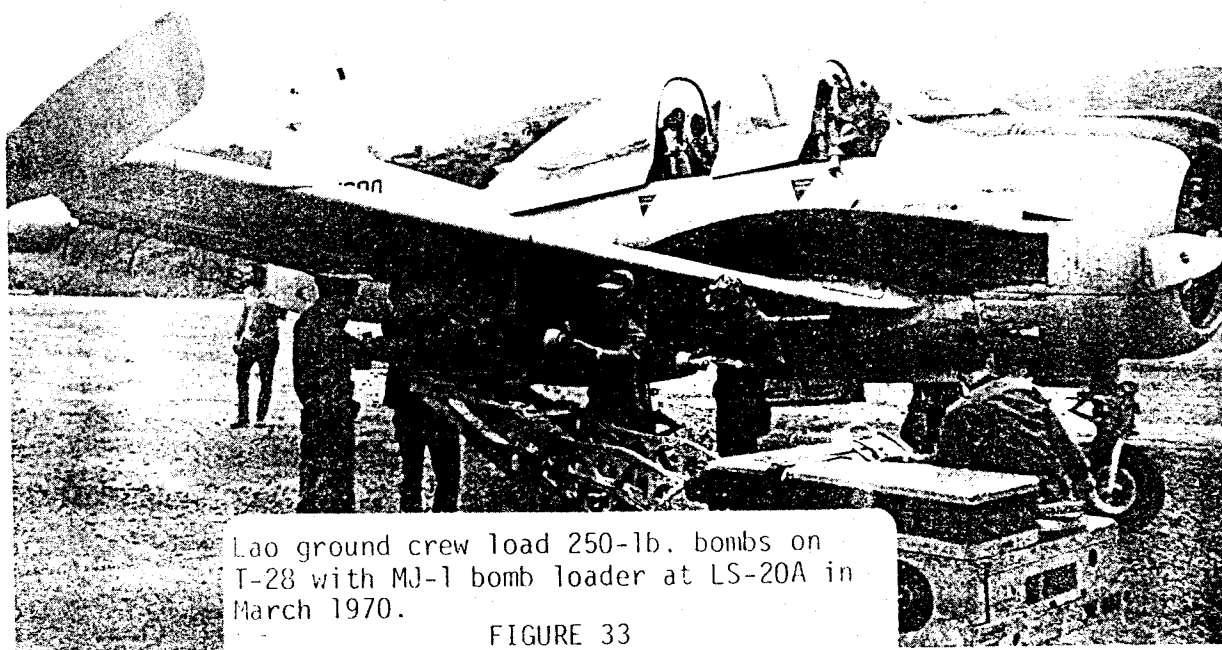


General Vang Pao and Air Operations
Center Commander upload ordnance at
Long Tieng in March 1970.

FIGURE 32



Lao workers build defense bunkers
on airstrip at LS-20A in March 1970.



Lao ground crew load 250-lb. bombs on
T-28 with MJ-1 bomb loader at LS-20A in
March 1970.

FIGURE 33

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CBU-19s and CBU-25s,^{31/} but the visibility was still too poor for the A-1s to work.

The AIRA evacuation was described by the Chief Raven:^{32/}

"There was a discussion about bringing everything out, the bomb loaders, the weapons systems, even the refrigerators, but Vang Pao's people wanted it toned down. Above all, we did not want to appear to be selling Vang Pao out. We did bring the intact weapons systems out and took them back the next day, not losing any bombing because of it. We just didn't want to give Vang Pao the feeling of being left behind. The General seems elated at the reinforcements."

Vang Pao had reason to be elated. In addition to indications that other Military Regions were preparing to send troops, the arrival on the 18th of additional Thai reinforcements airlifted from Thailand to Long Tieng, boosted overall troop strength and morale as well.^{33/} One hundred and fifty more Thais^{34/} were due to arrive on 19 or 20 March. The next day, one observer said:

"We first saw the Thais about 1300 hours on the flight line with their full field gear and steel helmets. They looked very different from the other troops. I watched them move across to where the Ravens had lived, looking extremely military with their field gear and their crew cuts, even though they had no rank or insignia. Later as they were setting up their equipment, one of their officers said, 'We're going to try and hold, and we'll do a good job. No matter what happens, they'll know they've been in a fight.'"

As the Thai soldiers began to position themselves around the King's summer palace high on the south ridge, the scene on the valley floor was far from orderly. Refugees continued to crowd around the airstrip, and CAS and AIRA personnel systematically destroyed "all classified documents, personal papers, map overlays, and other information of value to the enemy."^{35/} Some CAS personnel

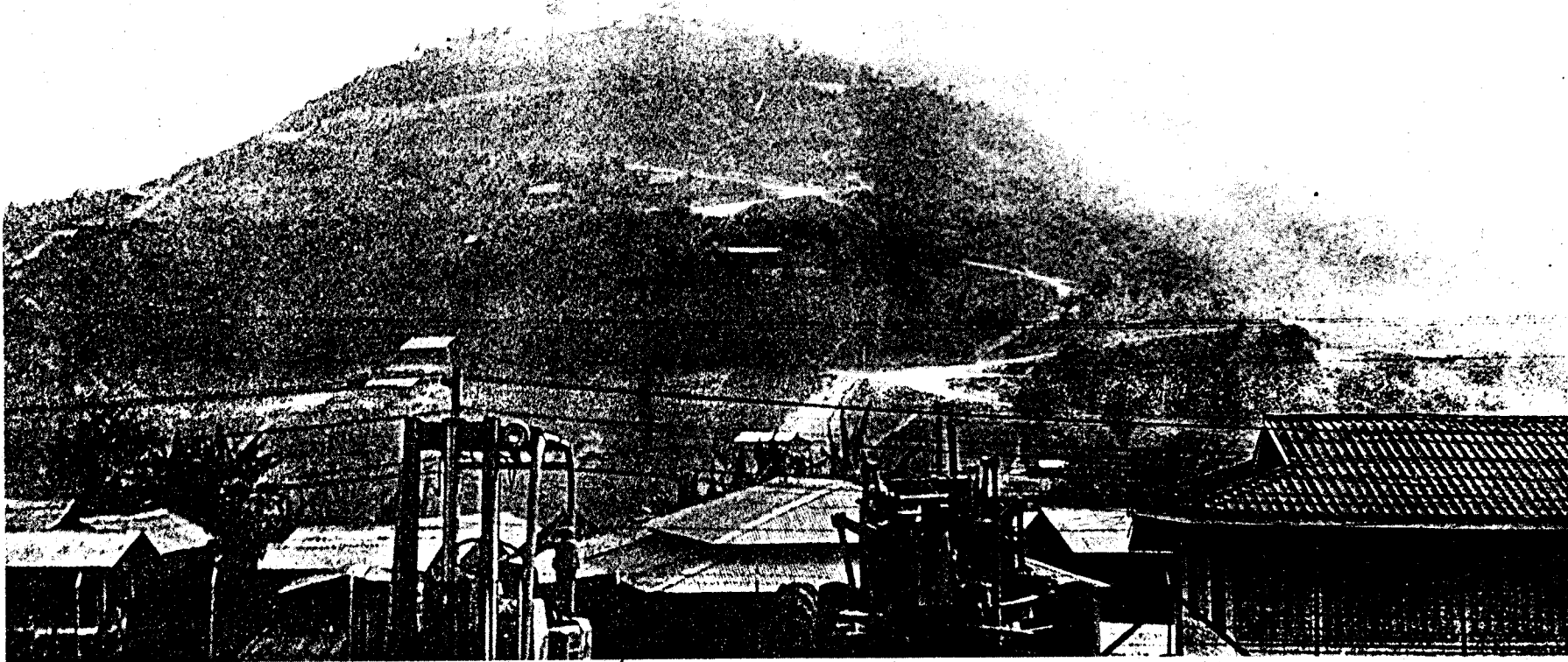
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began giving away personal war souvenirs and other items which they could not take with them, including watches and captured automatic weapons.^{36/} By the end of the day, all USAF and RLAf aircraft had been flown out, and all USAF personnel had been evacuated. CAS, Air America, and all other U.S. personnel were gone by nightfall.^{37/} Flying back, an Assistant Air Attache saw "taxis lined up for miles at Vang Vieng, taking people who could afford it south."^{38/}

With the large enemy force reported in a valley about three miles over the ridgeline to the northeast,^{39/} General Vang Pao decided to spend Wednesday night in Vientiane. Except for the Thais, none of the promised reinforcements had yet arrived, and the events of 18 March were later described in one word.^{40/} The scene, the joint attaches agreed, was one of "chaos."

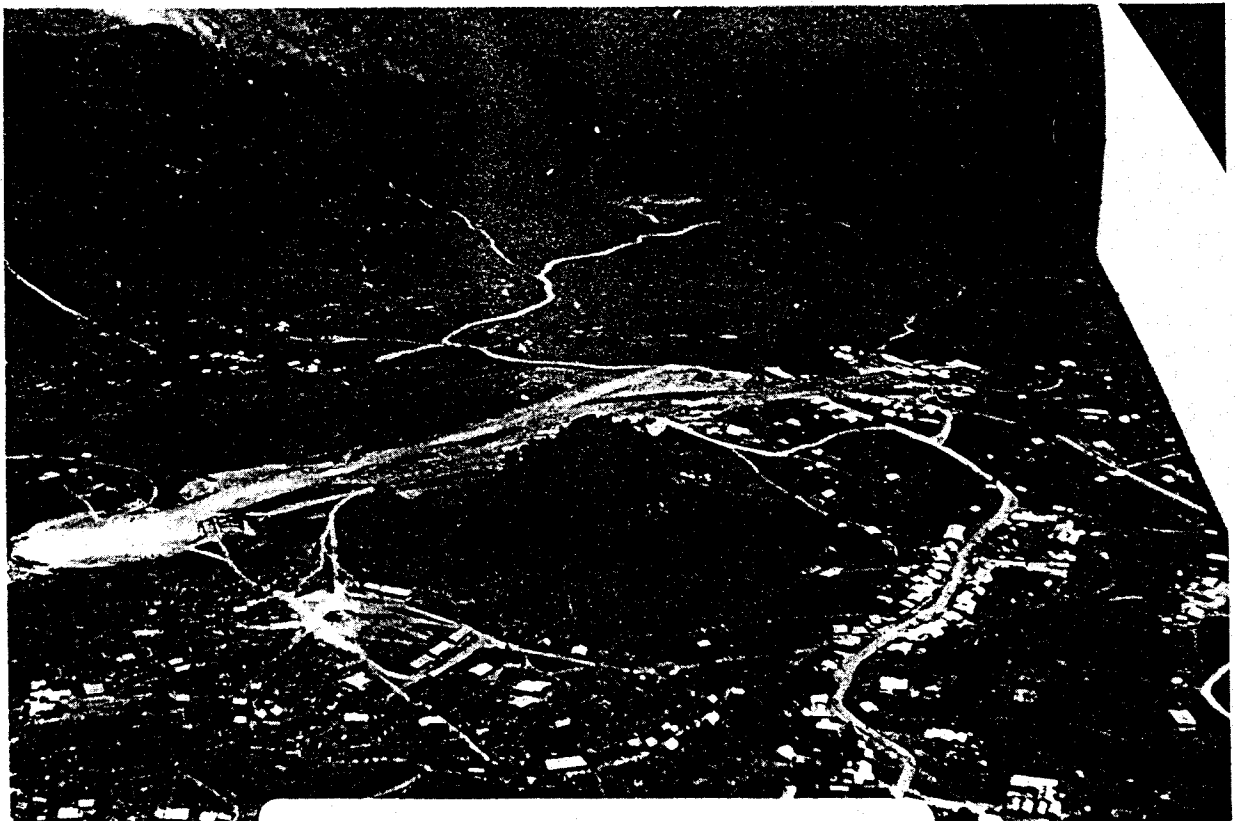
Although there were reports that some SGU elements still held positions at Sites 15, 05, and 72 (parts of the Vang Pao Line),^{41/} by 0200 hours on 19 March, the ground FAG at LS-15 reported heavy TIC and he was evacuating.^{42/} At 0300 hours, the first of the anticipated rocket attacks on Long Tieng occurred--six rounds of 122-mm fire (only four of which detonated)--but landing in the civilian market-place, the rounds caused no casualties. By 0600 hours, two enemy battalions were reported near Sam Thong and another two approaching Vang Pao's farm, about seven miles to the northeast of Long Tieng.^{43/} Except for the rockets, however, the night of 18-19 March remained quiet.

With 199 sorties scheduled into the BARREL ROLL for Thursday, 19 March, the first radio call to AIRA, Vientiane, from Long Tieng was heartening: "20A is still ours," the message said.^{44/} But with the early morning visibility



South Ridge of Long Tieng Valley with King
Savang Vathana's house appearing through haze
atop center knoll in March 1970.

FIGURE 34



Sam Thong - February 1970
FIGURE 35

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reported at less than one mile, no USAF strikes could be made for hours, and even though visibility did improve slightly during the day, only 29 of the 91 sorties allocated to the Ravens were flown.^{45/} As the evacuation continued, Cricket Airborne Battlefield Command and Control Center passed on a pilot report that "the bad guys are 5-6 kilometers north to northwest."^{46/}

The promised reinforcements from other Military Regions were assembling, but not without problems of their own. In MR IV, for instance it was feared that movement to Long Tieng of a Pakse SGU battalion might be delayed until 22 March. When asked why it was taking so long to move the unit, CAS replied that "the troops to be sent were displeased in the field and had to be re-assembled."^{47/} In MR IV, RLG General Phasouk was organizing a composite FAR/FAN battalion for movement to MR II "on order," and the Army Attache (ARMA) advised strongly that the "FAR general staff be influenced to dispatch [the] order ASAP. Receipt will help maintain momentum to provide requested reinforcements with minimum practical delay."^{48/}

Landing in what AIRA personnel called "abominable visibility," General Vang Pao returned to Long Tieng at noon, having conferred with Souvanna and the Chief of the FAR General Staff, General Oudone Sannaikone. CAS, ARMA, and AIRA personnel had arrived earlier.^{49/} The situation was about as confused as the day before. Not only were enemy strength and positions not determined precisely, but there was also no way of knowing exactly how many of Vang Pao's troops were present for duty. A CAS official later estimated that during the exodus, 50 percent of the ADCs and from 10-20 percent of the SGUs had left with their families.^{50/} Excluding the Thais, only 916 troops were accounted for

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in Long Tieng proper, including elements such as a 28-man T-28 ground crew, two groups of trainees deployed on the ridgeline, and a 50-man band quartered in the hospital.^{51/}

Vang Pao had other troubles as well. According to CAS, the General badly needed a victory, because he was in danger of losing the confidence of the Meo nation's council of elders. Apparently, tribal jealousy and rivalry were inflamed by Vang Pao's precarious situation;^{52/} nevertheless, Vang Pao expressed more optimism on 19 March than he had for some weeks. He was determined "to throw the enemy back from the Sam Thong/Long Tieng complex." In addition he reasoned that:^{53/}

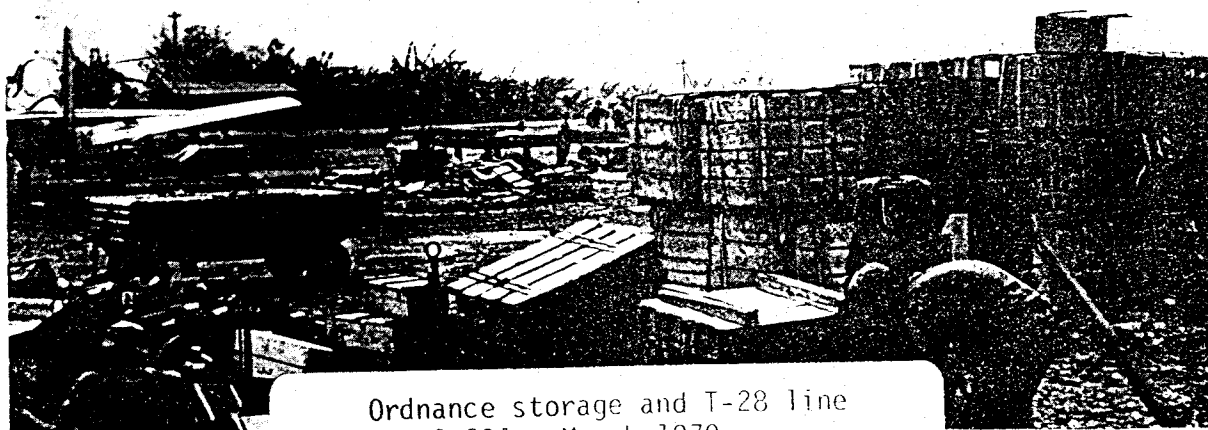
"The RLG forces had made a major gain when they had taken the PDJ. The Communists had to do something equally significant. This was the taking of Sam Thong which had never before been in the hands of the enemy. The 122-mm rockets fired into Long Tieng were insignificant. These were large, heavy weapons and the enemy was unable to transport them in any large numbers and a few miscellaneous rounds were of no consequence. The enemy's main advantage had been on the night of 18/19 March while people were being evacuated and some confusion reigned. The enemy had failed to take this advantage. Vang Pao felt the enemy was in insufficient strength to take Long Tieng against determined resistance. His troops would drive the enemy back away from Long Tieng, and he would employ additional troops to retake Sam Thong."

His confidence bolstered by the visit to Long Tieng that day of a delegation from the FAR General Staff,^{54/} Vang Pao stated he would spend the night at Long Tieng with his Meo FAC backseaters, but he was to change his mind and return to Vientiane by nightfall.

More reinforcements began to arrive that afternoon, but the weather continued poor. According to Vang Pao, it was as bad as he had ever seen it.^{55/}



Defensive bunker guarding airstrip
at LS-20A - March 1970.



Ordnance storage and T-28 line
at LS-20A - March 1970.

FIGURE 36

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Nevertheless, one 287-man SGU battalion and 41 men from a second battalion were flown from MR III, as well as 169 men from an MR IV battalion.^{56/} According to CAS, the MR III Savannakhet battalion--in contact with the enemy only hours before being ordered to Long Tieng--had marched all night on the 18th to reach the aircraft which brought them to Long Tieng. All reinforcements arrived too late on the 19th to be deployed that night but were reequipped to move out the next day.^{57/}

By evening of 19 March, three more irregular companies from MR I had arrived, and the estimated total friendly strength in and around the Long Tieng area was determined to be about 2,000 troops.^{58/} Even so, with Sam Thong yet unoccupied by the estimated two enemy battalions on the ridgeline to the north, the situation in the Long Tieng/Sam Thong Valley remained "critical," with "the pendulum's swing...to be determined during the next 4-5 days." "A great deal depended," said AIRA, "on the ability of the local forces to stand and defend."^{59/} About the only definite bright spot was that the TACAN station was back on the air after minor maintenance. It had not been overrun after all.

Later that evening, the center of the bypassed Vang Pao Line, LS-15 and LS-72, came under heavy attack, and by Friday morning, the 20th, both sites had been abandoned by the last of the SGU defenders.^{60/} At 0100 hours, a 20-man government patrol withdrew after a clash with an estimated enemy company only three kilometers from the Long Tieng airstrip,^{61/} and when the sun rose, the defenders on the airfield could barely see the ridgelines through the haze. During the night, the enemy had managed to set up a 12.7-mm heavy machine gun on the Skyline Ridge, which covered both ends of the runway, and was already

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firing into the valley. According to the AOC Commander, what occurred then was a stroke of luck, one which obviously boosted everyone's morale. Using what was called an eyeball estimate, a friendly mortar hit the gun position with its third round, creating one very large explosion and numerous secondaries as the ammunition blew up.^{62/} A patrol sent out to sweep the area found 33 enemy bodies, retrieved 11 rifles and three light machine guns, and estimated an additional 40 enemy wounded. According to one report, it had been General Vang Pao himself who had directed the successful mortar firing.^{63/}

In Vientiane, the situation at Long Tieng had been in doubt, and due to the enemy's proximity at one end, the runway was considered safe only for short takeoff and landing (STOL) aircraft and helicopters.^{64/} By mid-morning, however, aircraft landed and took off safely, and the RLAF T-28s began striking the ridgeline as they had the day before. Some patrols did go out, but the reports they brought back were discouraging. Not only was there an enemy concentration reported on the northeast side of the ridgeline, little more than a mile from the runway, but there was also evidence that an NVA artillery adjustment team was positioning itself only three kilometers away. General Vang Pao directed his four Lao and three Meo T-28 pilots to strike these positions regularly, and asked that all USAF air be directed on them as well.^{65/}

Visibility improved slightly during the afternoon, allowing occasional USAF flights to strike their targets visually, but a search and rescue operation for a downed aircrew in STEEL TIGER drew 54 of the 195 scheduled sorties from BARREL ROLL. Ninety sorties expended ordnance, many by LORAN or COMMANDO NAIL, on storage and troop concentrations.^{66/} There were few offensive movements on Friday by Vang Pao's forces, most of which were digging in for



CAS Headquarters located at Long Tieng.
FIGURE 37



Evacuation of Long Tieng on 19 March
1970.

FIGURE 38

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the anticipated enemy major assault. The T-28 strikes, added to 155-mm and 105-mm fire, provided what outgoing ordnance there was. "The situation at noon," one SITREP stated, "looked darker....Weather continues to hamper air operations, but is workable to a limited degree."^{67/} Two hundred additional reinforcements from units outside of MR II arrived and were airlifted into defensive positions by USAF CH-3 and Air America helicopters.^{68/} During the day, however, contact with the enemy was light.

By evening, all U.S. personnel had once again been evacuated, but the situation which had been called "deteriorated" in early morning was now considered "grave, at darkness of the 20th."^{69/} Although reinforced guerrilla battalions had been airlifted to outlying points in an attempt to buttress the Vang Pao Line, the enemy concentrations to the northeast of Long Tieng, if as large as had been reported, indicated there would be an active night ahead. At 1900 hours, an enemy force was reported in the valley just north of the headquarters compound, and by 1920 hours, it was moving toward Long Tieng.^{70/} At almost the same time, AIRA was notified that there was "heavy TIC between Skyline and 20A."^{71/}

The day's events were summed up in Vientiane, as an AIRA Intelligence Officer, who had been at Long Tieng all day, briefed the Senior Air Attache.^{72/} With regard to the overall situation, he said:

"We just can't tell. It's so fragmented that we don't know. Vang Pao is extremely dejected....He expected rockets tonight. Friendly units are moving down the hills toward 20A. The ridgeline is all enemy....We could watch the T-28s from the AIRA house. Apparently, the enemy has no fear during the day, but they aren't firing rockets because of the big back blast."

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Mentioning the meeting at Udorn, held that morning with Ambassador Leonard Unger, Adm. John S. McCain, Jr., Commander-in-Chief, Pacific Command, and others, the Air Attache outlined hopes for the future: ^{73/}

"After much discussion of alternatives, they decided that if they leave things as they are now, there's a good chance the RLG will ask formally for Thai troops. So they're going to provide a group of 700 Thais now, which they feel could hold for about 70 days until the rain starts. Meanwhile, USAF is going to increase its emphasis on interdiction. I think the enemy will harass for one or two nights more, then move."

During the night of 20-21 March, scattered clashes were reported all around Long Tieng, but the enemy did not show indications of starting a major attack. Six more rounds of 122-mm rocket fire impacted in almost the same place as they had two nights earlier, but again there were no casualties. Neither was there evidence that the enemy had occupied Sam Thong, although friendly units on the ridgeline to the south did not venture into the city itself.

At dawn of Saturday, 21 March, the weather was no better. Visibility was no more than one and a half miles, and there was a scud layer forming at 1,000 feet above ground. ^{74/} Four Raven FACs were airborne from Vientiane by 0700 hours, but when they arrived at Long Tieng, the supply aircraft were not yet there, and the weather was too bad for them to work USAF fighters. By 0900 hours, flights of F-105s had already been diverted from Long Tieng to other targets, ^{75/} and not until midmorning were the Air America supply aircraft cleared to leave Vientiane. Although the C-123s had been standing by since sunrise, an Air America representative summed up the attitude of the civilian contract airline: ^{76/} "I'm not going to release them to go up there until it's safe." At 0905 hours, Cricket ABCCC reported that neither supplies nor ordnance had yet landed

STOP



Operations at Long Tieng - March 1970.
FIGURE 39

STOP

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at Long Tieng, but that two Ravens and one Air America Porter, concerned about the enemy troops reported less than two kilometers from the end of the runway, had been able to land by touching down at midfield.^{77/} At 0912 hours, the Long Tieng radio station came on the air, and the Air America C-123s were released for takeoff.^{78/}

The visibility was below working minimums for almost all USAF aircraft. During the morning, even the A-1s were diverted by Cricket, one flight at 1035 hours, another at 1230 hours. When the latter flight checked in, Cricket reported that Long Tieng had been unworkable all day.^{79/} The RLAF T-28s, able to communicate directly with the ground FAG and often receiving strike instructions prior to takeoff, continued to bomb the enemy on the Skyline Ridge and the opposite slope to the north. The short distance to their targets permitted them to log more than 50 sorties on the five aircraft that flew into Long Tieng that morning.^{80/} Targets for the afternoon included a karst ridge only one kilometer from the end of the runway. According to AIRA, the prominent ridge housed the same artillery adjustment team that had been spotted the day before, now much closer to Long Tieng.^{81/} One Air Attache said:

"Although these strikes by the T-28s furnished an excellent air show for the defenders of Long Tieng, some felt it was not realistic to think the enemy this close to the strip. This opinion changed when one of the T-28s suffered AK-47 hits from the team being bombed."

An observer of the events of 21 March had this to say:^{82/}

"Prior to landing at 20A, all we could see until directly in the Long Tieng Valley were murky mountain peaks obscured by the haze and occasionally

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blotted out by thick columns of brown smoke from ground fires. Often, black burnt particles, some as large as pieces of carbon paper, flew by the aircraft. Visibility was about one mile or less, with the air to air visibility effectively zero. As we broke out over the runway, the hills to either side appeared deserted, with no sign of any activity. Aircraft suddenly appeared from almost all sides, some landing, some taking off--helicopters, C-123s, Caribous, O-1s, T-28s, Porters, and an occasional C-130. As we landed to the west, a Porter was taking off to the east.

"On the ground, the sight was one of hasty desertion. Pieces of paper littered the dirt roads and paths, and what had been a busy market street presented a series of shuttered fronts and closed stalls. Except for the Wat to the north of the airstrip, buildings were dusty brown, single story, slant or flat roofs. Two new buildings of stone and concrete stood up, one being Vang Pao's residence, the other the new AIRA quarters which was two stories and made of concrete. The CAS headquarters hid unobtrusively to one side of a gently rising street. It was a single story cement block building surrounded by a wire fence and sandbagged. There was little sign of action there.

"The only people on the streets were soldiers--Meos with their long hair, usually holding their rifles over their shoulders by the barrel, sauntering along in pairs or small groups. The Thais presented another picture as they loaded sandbags, seeming always to be going somewhere and doing something. Whenever an outgoing round would sound (there were no incoming while I was there), all soldiers would stop what they were doing and try to locate the source of the noise--but no one seemed frightened, just nervous.

"Generally, the atmosphere seemed not unlike a religious holiday, with everyone inside. One had the feeling that at any moment, the shops would open and people would come pouring out. Long Tieng is a village built to be lived in--not evacuated; thus its permanence emphasized the bleakness of its desertion.

"The air activity was constant, as were, after 1400 /hours/ the sounds of outgoing rounds. As the hours passed, people did become more apprehensive. Discussion in AIRA operations centered around whether a round was a

105 or a DK-82, and people walked to the window often to look out. Dust from landing aircraft kept the already present haze thicker down by the flight line, and the ridgelines to either side of the valley were only dimly visible. Even binoculars did not help--in the best of focus, the trees and clearings were barely visible through the glasses.

"As we took off, we turned a hard right to avoid a landing T-28, one of the Meo pilots who had been flying sortie after sortie since late morning. They would load four 250-pound bombs, taxi and takeoff, disappear over the ridgeline for a few minutes and return, slicing down on the runway with no attempts at smooth landings, returning no more than five minutes after takeoff for more bombs. Game little guys. I waved to the Lao mechanic as we taxied out--he returned the wave half-heartedly and without a smile. After all, he was planning to spend the night."

For the AIRA personnel, still packing up personal belongings and making plans to transport tables, chairs, refrigerators, and other removable items, an unexpected treat was provided. Three large bags of frozen prawns were found, and as the AOC Commander operated the only radio set left in the command center, he and his staff enjoyed cold shrimp and cocktail sauce. ^{83/} Also, Vang Pao's spirits had improved. That morning, the AOC Commander said the General had ^{84/} been loading bombs on T-28s.

Although there were no significant clashes with the enemy on Saturday, the 21st, a significant change began, hardly noticeable at the time, but one which became a trend. During the afternoon, a guerrilla battalion began a sweeping operation, moving out from the ridgeline north of Long Tieng to the east. By 1730 hours, it had encountered enemy troops and was able to call in airstrikes ^{85/} because of the slightly improved visibility. Although contact was broken, this battalion of SGUs had been one of the first to meet the NVA while seeking

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him, rather than while retreating. Bolstered by the presence of friendly troops whose numbers apparently equaled those of the enemy, Vang Pao's forces seemed willing to show some initiative.

Of special significance was the all night presence of USAF gunships, both Spookies and the newly introduced AC-119K Stingers. During the evening, Tom Tom FAG on the Skyline Ridge had enemy troops within 600 meters of his position, but AC-47 support drove them off.^{86/} With the weather still marginal, however, the SGUs, who had retreated so rapidly whenever air support had not been available, could not be counted upon to hold in the face of a strong enemy attack.

With his small nightly probes, ineffective but demoralizing rocket attacks, and apparently growing strength, by the 21st, the enemy had succeeded in applying psychological as well as military pressure. In addition, the delay in air operations each morning until the airstrip was deemed secure, severely restricted supply and strike aircraft.^{87/} To make matters worse, the rocket attacks during the night of 21-22 March--nine rounds of probable 122-mm--were more accurate. The rockets impacted only a few hundred yards from the AIRA/CAS complex. The series in which the rockets hit indicated that the enemy now had three rocket launchers in position.^{88/} "The defense and holding of the valley," said one report, "remain questionable and critical."^{89/}

Sunday, the 22d, was a relatively quiet day at Long Tieng, while in Vientiane, hundreds of RLG troops practicing for Monday's parade to celebrate FAR Armed Forces Day blocked all traffic in the center of town and forced AIRA, ARMA, and CAS personnel to make long detours through narrow back streets to get to work. Nevertheless, at 0645 hours, the AOC Commander reached Long Tieng.

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and ground support people were active by 0900 hours.^{90/}

That morning Vang Pao was once again dejected. Called back to Vientiane for an important conference, he spoke to the AOC Commander before leaving. He appeared unhappy over the enemy's continued gains and the "lack of positive retribution by his own forces."^{91/} The battalion he had sent to Sam Thong had not moved from the ridgeline to the south of the city; the forces dispatched north to the Vang Pao Line had made no significant gains; and despite the relative lull in enemy activity, there was no way to tell how badly, or even if, the NVA had been hurt. Visual reconnaissance was impossible because of the smoke and haze, and the population base which had formerly provided most ground intelligence had fled.

Poor as usual in the morning, the weather improved slightly in the afternoon, allowing the Ravens to work a few USAF flights, but the general pattern continued as it had for the previous three days. Friendly forces were said to be "repositioning." The RLAF T-28s worked the north side of the ridgeline once more, as well as striking suspected troop concentrations in other areas. The only apparent departure from the previous day's operations, however, was the transfer of one O-1 to the Thai contingent, which supplied its own pilot and mechanics for artillery adjustment missions.^{92/} During the afternoon, a 280-man SGU battalion prepared to sweep north from the ridgeline but reported a large enemy force below them at 1800 hours.^{93/} After a brief clash five miles southeast, government troops found the bodies of six enemy women soldiers;^{94/} otherwise, the day was uneventful.

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Elsewhere, troops which had scattered were being rounded up and brought back. About 40 kilometers to the east, 3,000 villagers in the Pha Phai region around Site 65 were preparing to evacuate, even though there had been no enemy pressure. "They feared," CAS said, "that the civilian evacuation of Long Tieng meant a complete government collapse in Northeast Laos."^{95/} Far to the southwest, an even more alarming situation seemed to be developing. AT 1510 hours, a report which was called a "possible case of FAN exaggeration" claimed that 350 enemy troops had been sighted northwest of Vang Vieng, one of the primary fallback positions, in the event Long Tieng was lost. By 1750 hours, all USAID personnel and their dependents were being evacuated from Vang Vieng.^{96/} At nightfall, with 200 enemy reported on the ridgeline above Long Tieng, even the personal motorcycles of the Meo pilots were flown to Vientiane, as were the FAC backseaters and their wives.^{97/} As before, all U.S. personnel also left.

During the night, enemy probes continued, but with flare and gunship support, three government positions held against NVA attacks. There were few casualties on either side.^{98/} Only one outpost was lost. TACAN Site #2, five kilometers northwest of the airstrip, held despite incoming rounds and ground assaults. Just before dawn, more 122-mm rockets hit Long Tieng, causing only minor damage.^{99/} Two rounds impacted 100 meters from General Vang Pao's house.

The General was in Vientiane that night, and he was not able to return in the morning. On Monday, 23 March, the rains came and fell so heavily all day that only two Raven FACs were able to penetrate the clouds and land at Vientiane. Nearly all of the USAF missions were flown against 7AF/13AF-developed IFR Box-Score target areas, with the results not observable because of heavy clouds.



Refugees leaving Long Tieng during
March 1970.

FIGURE 40

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layered from the ground to 30,000 feet and sprinkled with thundershowers.

The daytime bombing was only a rehearsal for an all-out night effort. That evening, in the vicinity of Site 72, 12 miles northeast of Long Tieng, a special mission of major proportions was flown against the suspected main enemy storage and staging area. Five days later, CAS reported General Vang Pao's assessment of this strike: ^{101/}

"He believed the enemy's plans for an all-out attack on Long Tieng had been forestalled by the destruction on 23 March of the majority of the North Vietnamese logistical preparation for the attack. Vang Pao said that low-level reconnaissance of the site...had revealed the destruction of caches even he had not suspected were so close to Long Tieng. The effect, according to Vang Pao, has been to forestall for the time being what had been an imminent all-out North Vietnamese attack on Long Tieng. Now the enemy must begin anew to porter ammunition and rice from the end of the Plaine des Jarres. This the enemy will certainly do, Vang Pao believed. He pointed to past experience showing that the North Vietnamese customarily make three strong attacks on target positions before giving up on them."

While these strikes were occurring, the enemy around Long Tieng was active, but there were no rocket attacks that night. At 0100 hours on the morning of the 24th, TACAN Site #2 was again attacked, and by 0200 hours, the NVA had captured it. The old navigation building was burned. Another government position three kilometers northeast managed to hold against an estimated NVA company. ^{102/} A probe against the Low Frequency Radio Beacon outpost was also repulsed, ^{103/} but these incidents were apparently part of a general enemy movement to secure control of the Skyline Ridge. By morning, no one knew with certainty who held this important strategic location. ^{104/}

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Tuesday, the 24th, had the best weather in weeks, with scattered clouds and excellent visibility. The rains had cleared out the haze and extinguished the fires. The RLG forces took advantage of the good weather to begin a series of countermoves to relieve the pressure on 20A. Throughout the morning, 52 USAF sorties, ^{105/} in concert with RLAF T-28s and ground artillery, pounded the ridgeline within view of the Long Tieng garrison. Although AIRA personnel continued to remove their remaining equipment, still calling the situation "critical," General Vang Pao returned and was "very much in charge" as he assisted in the direction of airstrikes and artillery fire. ^{106/} That afternoon, following preparatory airstrikes by A-1s, the SGUs assaulted the Ridgeline and regained control of the summit and its TACAN site. ^{107/}

That evening, the enemy made several probes against the Ridgeline but each time was driven off by gunships. An NVA mortar attack before dawn on a government position near Site 72 to the northeast was stopped by A-1 strikes. ^{108/} At almost the same time, Hornet FAG with a guerrilla unit east of Sam Thong came under heavy attack, but first Spooky assistance, then continuous Blindbat flaring as the weather closed in, caused the SGUs to hold their position, suffering 11 killed and 26 wounded. The NVA left eight bodies and were observed carrying away ten more. ^{109/}

Even though the weather deteriorated during the day of the 25th, USAF aircraft were able to complete 180 of the 195 scheduled sorties, many of them by means of LORAN or COMMANDO NAIL deliveries. ^{110/} Hornet FAG received three flights of A-1s for support against enemy attacks which continued until mid-morning. In addition, Ravens directed more than 60 strikes against enemy positions on the

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eastern slope of Phou Pha Sai, preparing the way for assaults against this key mountain in the Site 72 area. ^{111/} There were no significant moves by either side on the ground, and at Udorn, CAS and AIRA personnel commented on the failure of the NVA to follow up their earlier attacks on Long Tieng. An AIRA representative said, "We just don't understand the NVA. They're not doing what they should be doing." A CAS official replied: ^{112/}

"For whatever reason there is, the enemy is now in for a fight. The two Savannakhet battalions are all Laos; the Pakse battalion is mostly Lao. One of the ironies is that now its the Lao who are fighting for Long Tieng. Generally, the main enemy force is in the Site 72 area, maybe two battalions. We don't know. The enemy capability to overrun Long Tieng is becoming less and less. There are stronger defenses each day, and the friendlies are sending out patrols and FAG teams. We have screening positions to the east, north, and west, although there are not enough of them to stop a sapper attack. Each night a few enemy get on the ridge-line and do things like trying to set up a 12.7, but we don't know whether Hanoi wants to take Long Tieng or not. Maybe they've accomplished what they wanted to do by giving Vang Pao a bloody nose."

More reinforcements also arrived in Long Tieng, including 79 volunteers from northwest Laos who were being paid, according to Air America pilots, a bonus of \$1.00 a day. ^{113/}

In all, there were now approximately 3,400 troops in the immediate Long Tieng area, ^{114/} with SGUs, Thais, and Lao troops from every military region deployed around the valley in a surprising display of unity. An artillery fire control center was beginning to operate successfully, and even with the less than favorable weather, RLAF T-28s flew 43 sorties on the 25th, many of which were ordered by General Vang Pao to destroy supplies at Sam Thong which might be of value to the enemy. Vang Pao still had plans to retake Sam Thong, but he

had chosen to retain forces earmarked for that task in order to defend Long Tieng.^{115/}

Late in the afternoon, a guerrilla unit just east of Site 72 clashed with a smaller enemy force, and after a 25-minute fire fight, withdrew and called in airstrikes.^{116/} In Long Tieng, for the third night in a row there were no rockets fired into the valley.

During the night of 25-26 March, only small enemy probes occurred. At 2130 hours, guerrillas heard one of their perimeter mines detonate, and a morning patrol found five NVA bodies and one wounded soldier. "Attempts to capture him alive were unsuccessful as he fired at the Lao patrol, and was subsequently killed."^{117/}

Thursday, 26 March, began with low clouds and occasional rain, but weather improved during the day so that 185 of 205 scheduled USAF sorties delivered ordnance in BARREL ROLL.^{118/} The RLAF that day flew 94 missions in the Long Tieng area.^{119/} Credited to the RLAF, however, were 12 sorties actually flown by USAF pilots in T-28s from Udorn, who struck two enemy troop concentrations very close to Long Tieng. A 300-man force was reported to be in a ravine two kilometers northeast of the airstrip, and repeated airstrikes were made throughout the day on this position. Because of low clouds which drifted in and out all day, one flight of four USAF T-28s put all bombs on target at 1330 hours by altering their normal dive bomb pattern to fly over the ridgeline in a shallow approach, dropping at extremely close range.^{120/} Commended by Tom Tom FAG for excellent bombing, crew-members of this flight were later surprised to learn that Gen. Vang Pao himself had been controlling strikes that day from Tom Tom's position.^{121/}

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Beginning with 26 March, the air effort to defend Long Tieng was characterized as "intense and effective."^{122/} With no TICs during the day, Vang Pao decided to initiate his plan to retake Sam Thong. The three-column attack was postponed, however, when a government patrol saw an estimated enemy battalion moving south toward Long Tieng, and the forces were diverted to head off the enemy. USAF and RLAF airstrikes pounded the enemy battalion throughout the day and the expected attack on Long Tieng never materialized.^{123/} At the same time, USAF jets continued to strike against the enemy logistical system. Interdiction points west and east of Ban Ban were hit hard, as were bunkers, caves, and POL storage areas.^{124/}

From the 26th on, the movements of government forces were predominantly outward. Now possessing enough strength for a defense of Long Tieng, Vang Pao could commit his SGUs to the role they were most familiar with--probing to force the enemy on the defensive. In the early morning of the 27th, for example, a guerrilla unit moving out northeast of Long Tieng was attacked, suffering two killed and one wounded. After calling for air support, they saw "several bodies being dragged away from the area after the airstrike."^{125/} Three separate enemy assaults on a prominent ridgeline position were repulsed that night with gunship and flareship support, as were two other attacks on friendly outposts.^{126/}

Friday, the 27th, dawned clear and sunny, and the weather remained good all day. The lowest visibility reported was three miles.^{127/} Even though USAF sorties in the Long Tieng area dropped abruptly as two special missions (Half Moon and Ringo) against the other end of the enemy supply line were flown on the 27th and 28th, the 67 USAF and 66 RLAF sorties to MR II provided support to

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government forces. ^{128/} Throughout the day, USAF/RLAF airstrikes hit enemy troop concentrations, and by nightfall, an estimated NVA battalion was reported surrounded by friendly forces. The summit of Phou Pha Sai, as well as Site 14 to the southeast, was reoccupied by government troops, and at 1500 hours, elements of a guerrilla unit entered the deserted town of Sam Thong. NVA reported southeast of Sam Thong were hit hard by airstrikes and artillery fire, and the enemy was observed "carrying or dragging numerous killed and wounded." ^{129/} That night, an AC-119K Stinger destroyed six trucks on Route 7. ^{130/} Even though the Ambassador to Laos still termed the situation "serious" on the 27th, ^{131/} the joint attaches in Vientiane noted that "RLAF T-28s, USAF fighter bombers, and Raven FACs have been the main force detaining the enemy as the friendlies prepared to defend Long Tieng." ^{132/}

After 28 March, USAF sorties to BARREL ROLL remained near the 200 level, with A-1s, F-4s, AC-47 Spookies, AC-119 Stingers, and AC-130 Spectres used throughout the night for armed reconnaissance and troop support, and during the day F-105s, F-4s, and A-1s attacked the enemy's supply lines. Additional RLG reinforcements were programmed, more of Vang Pao's forces were returning, and with air support, the morale of the ground forces was the best it had been in months. Early on the morning of the 28th, for example, an enemy company staged an attack on a government position north of Long Tieng, but a USAF Spooky was able to start firing three minutes after a request for support was made. Two hours later, three enemy companies attacked the same position, only to be dispersed by artillery fire so effective that an RLAF AC-47 on its way to the scene was turned back by ABCCC. ^{133/} Forty enemy soldiers were confirmed killed, and the retreating NVA left behind them 77 rucksacks and pith helmets, 48

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crew-served weapon rounds, and other miscellaneous gear. ^{134/} On the night of 30th, an NVA battalion twice attacked a main government defensive position near Long Tieng, but the enemy assault was "quickly suppressed by airstrikes." ^{135/}

Clashes were frequent in the days following, but with continual air support, government troops held their ground, even while taking more casualties than they had in their retreat across the PDJ. On the 30th, three SGU companies entered Sam Thong without resistance, and by the end of the month, civilians were returning to Long Tieng. ^{136/}

On 30 March, the U.S. Ambassador reported the situation was "brighter." There were indications, however, that the enemy was attempting to regroup, and Intelligence reported: ^{137/}

"...heavy truck movements along Route Seven into the area of the PDJ. More significantly, there is evidence of trucks moving in daylight and of enemy unit movements in the PDJ itself. All this suggests NVN may be accelerating their buildup in the knowledge that if they are to take Long Tieng they will have to make their move soon."

To restrict the enemy's increased supply effort, USAF emphasized road cutting and munitions package emplacement. As 7AF/13AF DOCO said: ^{138/}

"What we're doing is this" we're increasing interdiction on SC 900, the key interdiction point in the BARREL ROLL. We estimate it takes them about two hours to get it cleared, usually from 2000 to 2200. Our recommendation is to put about 40-50 sorties a day for interdiction. CAS estimates that there are about 1,100 people dedicated to keeping this point open."

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Gunship support was also increased, and with AC-130 and AC-119K route coverage throughout the nights, truck kills rose accordingly. On the 30th, for instance, an AC-130 reported seven trucks destroyed and three damaged on Route 7 between Ban Ban and Nong Pet. ^{139/}

With almost two months left before the rainy season, there were hopes expressed that once again, as had happened so often in the war for Laos, the initiative would shift to the RLG. A CAS official summarized one outlook at the end of March: ^{140/}

"Basically, the enemy defeated himself by not pushing forward on the night of the 18th. Now we've got reinforcements in, and in order to take Long Tieng, he'll have to use massive forces. Things do look better, and now it's we who are on the offensive....The enemy has outrun his supply and logistics. He ran into stiffening resistance on the ridgeline and backed off. Now, we think we may be able to push the enemy back."

Gen. George S. Brown, 7AF Commander, indicated the changed outlook at the end of March: ^{141/}

"Right now, we're getting some good results at Long Tieng in defense of Vang Pao's troops there. I'm optimistic and I think we'll be able to turn the tide. The enemy troops are out on the end of a long logistics system. And we're hitting it at both ends."

The U.S. Ambassador to Laos, G. McMurtrie Godley, agreed, writing General Brown on 1 April: "Certainly, the fact that Long Tieng is still in friendly hands is due to your air support." ^{142/} From Thailand, Ambassador Leonard Unger emphasized not only the role of USAF airpower but the significance of the stand at Long Tieng: ^{143/}

"The current and, thus far, successful defense of the Long Tieng base area can be attributed in a great measure to the employment of tac air, particularly the A-1. Without the level of support provided in recent weeks, despite adverse weather, this vital area undoubtedly would have been lost, with grave consequences to the stability of the RLG and the United States Government positions in Southeast Asia."

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EPILOGUE

During the period of 1-15 April 1970, as this report was being prepared for publication, the situation in Northern Laos has continued to improve. The interdiction points on Route 7, west of Ban Ban, have been kept closed for 11 of the 15 days. The A-1s, F-4s, and F-105s flew an average of 150 sorties per day, providing close support to General Vang Pao's forces holding the Lima sites around the PDJ, including Lima Site 82, fifteen miles northeast of Ban Ban. The enemy has made repeated attempts, with only limited success, to dislodge the friendlies holding the Lima sites which threatened the NVA flanks and rear. The support furnished by fighters and the ever-present gunships, along with the constant pressure on the enemy's logistics, is the principal reason for continued friendly presence in these advanced Lima sites.

The AC-130, AC-119K, and AC-47 gunships flew 85 sorties during the first 15 days of April, of which 73 were in support of TICs. They also destroyed or damaged 79 trucks. In addition to escorting the gunships, the fighters flew 158 sorties in support of TICs, and destroyed or damaged 51 enemy trucks. During these 15 days, the BDA also included the following:

Enemy AAA Destroyed and Damaged	14
Secondary Fires and Explosions	499
Structures Destroyed and Damaged	191
Enemy Killed by Air	88

In the Long Tieng area, Vang Pao's forces have moved out to consolidate defensive positions; the enemy has so far failed to capture Long Tieng. Battered

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by air in his forward positions and his logistics tail, and with the wet season only a few weeks away, the enemy does not appear to be in a position to take Long Tieng or push his offensive appreciably beyond the PDJ. The pessimism of the Lao leadership has begun to dissipate, and U.S. officials are cautiously optimistic. The enemy does not appear to have sufficient supplies forward to continue his offensive against stiffening ground resistance which, as this report points out, is the keystone to successful use of tactical air under existing conditions in Northern Laos.

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FOOTNOTES*

CHAPTER I

1. (S/AFE0/LD) CHECO Rprt, Hq PACAF, DOTEK, "Air Support of COIN in Laos, Jul 68-Nov 69," 18 Nov 69. (Hereafter cited: Air Support of COIN.)
2. (S) Interview, U.S. Ambassador to Laos, G. McMurtrie Godley, by Ken Sams and Lt Col John Schligh, Vientiane, 14 Mar 70. (Hereafter cited: Godley Interview.)
3. (S/AFE0/LD) "Air Support of Counterinsurgency."
4. (S) Interview, Gen. George S. Brown, Comdr, 7AF, by Kenneth Sams and Lt Col R Kott, 30 Mar 70. (Hereafter cited: Brown Interview.)
5. (S) Interview, AIRA Personnel, Vientiane by Kenneth Sams and Lt Col John Schligh, Vientiane, 14-15 Mar 70. (Hereafter cited: AIRA Interview.)
6. (S) Interview, Col William R. Evans, Acting Dep Comdr, 7AF/13AF, by Kenneth Sams and Lt Col John Schligh, Udorn RTAFB, 8 Mar 70. (Hereafter cited: Evans Interview.)
7. (S) AIRA Interview.
8. (S) Brown Interview.
9. (S) Interview, Gen. Creighton Abrams, Jr., COMUSMACV, by Kenneth Sams and Maj Philip Caine, Saigon, 3 Mar 70. (Hereafter cited: Abrams Interview.)
10. (S) Interview, Col Howard M. Fish, Director of Tactical Analysis, Hq 7AF, by Kenneth Sams and Lt Col John Schligh, 15 Mar 70. (Hereafter cited: Fish Interview.)
11. (S) Abrams Interview.
12. (S) Daily Operations Briefing, Hq 7AF/13AF, Udorn RTAFB.
13. (S) Briefing, Gen. George S. Brown by 7AF DO/DI Staff, 11 Mar 70.

* Extracts from TOP SECRET documents are classified SECRET.

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14. (S) Interview, Senior CAS Official, by Kenneth Sams and Lt Col Schligh, Vientiane, 14 Mar 70. (Hereafter cited: CAS Interview.)
15. (S) Notes, Udorn RTAFB, BARREL ROLL Working Group Meeting, 10 Dec 69.
16. (S) Godley Interview.
17. (S) Interview, Col Eugene P. Sonnenberg, DO, 7AF/13AF, by Kenneth Sams and Lt Col John Schligh, Udorn RTAFB, 17 Mar 70. (Hereafter cited: Sonnenberg Interview.)
18. (S) Brown Interview.
19. (S) Godley Interview.
20. (S) CAS Interview.
21. Ibid.
22. (S) Fish Interview.
23. (S) Interview, Col E. Wootten, DI, 7AF/13AF, by Lt Col John Schligh, 27 Mar 70. (Hereafter cited: Wootten Interview.)
24. (S) CAS Interview.
25. (S) Msg, AmEmb/Vientiane to SECSTATE, Nr 1714, 18 Mar 69.
26. (S) Interview, Ed Archer, Political Officer, U.S. Embassy, Vientiane, by Kenneth Sams and Lt Col John Schligh, Vientiane, 14 Mar 70. (Hereafter cited: Archer Interview.)
27. (S) Sonnenberg Interview.
28. (S) Interview, Maj John Garrity, Intelligence Chief, AIRA, Vientiane, by Kenneth Sams and Lt Col John Schligh, Vientiane, 14 Mar 70.
29. (S) CAS Interview.
30. (S) Briefing, Maj Gen Robert L. Petit, Dep Comdr, 7AF/13AF, Udorn RTAFB, 21 Feb 70.
31. (S) Godley Interview.
32. (S) Archer Interview.
33. (S) CAS Interview.

- [REDACTED]
- [REDACTED]
34. (S) Brown Interview.
 35. (S) CAS Interview.
 36. (S) Interview, Lt Col Kurtz, AIRA, Vientiane, by Kenneth Sams and Maj John C. Pratt, Vientiane, 20 Mar 70.
 37. (U) Article, Washington Post, 5 Mar 70.
 38. (TS) Msg, AmEmb/Bangkok to COMUSMACV, 6 Apr 70.
 39. (S) CAS Interview.
 40. (S) Archer Interview.
 41. (S) AIRA Interview.
 42. (TS) Msg, CAS, Vientiane, to SSO, COMUSMACV, 142016Z Feb 70.
 43. (S) Archer Interview.
 44. (S) Brown Interview.
 45. (S) Interview, James Murphy, Political Officer, U.S. Embassy, Vientiane, by Kenneth Sams and Lt Col John Schligh, Vientiane, 14 Mar 70.

CHAPTER II

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APPENDIX I

ENEMY AAA, NOV 69 - MAR 70 AND AAA REACTIONS AND LOSSES

A late 1969 intelligence report predicted "a buildup of AAA greater than ever experienced in Laos."^{1/} As of 6 December 1969, thirty-five areas of high-threat existed in BARREL ROLL, broken down as follows:^{2/}

1 - 57-mm
15 - 37-mm
3 - 23-mm
16 - AW

By March 1970, the overall threat had more than doubled. As of 7 March, the high-threat areas were these:^{3/}

1 - 100-mm
2 - 57-mm
25 - 37-mm
9 - 23-mm
36 - AW

Except for those located along Route 7, east of Ban Ban, AAA sites did not exact a high toll of USAF aircraft. One reason was improved air tactics; another possibility was voiced by the Deputy Commander, 7AF/13AF: "Maybe they just haven't got as good gunners this year."^{4/}

For a while it seemed as if NVN/PL AAA crews were changing their tactics. According to a Laredo FAC, by 10 December 1969, there were few multiple AAA sites remaining along Route 7. Instead, single sites were appearing, "some as much as one kilometer apart."^{5/} Soon, however, it became apparent that what had appeared to be a change was in fact not so; the single sites were fore-runners of the standard multiple position sites after all. "They tried it for

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a while," said one pilot, "but now they're going back into clusters, but not all of them occupied."^{6/}

Although there were intermittent reports of radar tracking, no radar-directed AAA fire was confirmed, but after the 22 December SAM launch against B-52s near Ban Karai pass in STEEL TIGER, it became obvious that the enemy was interested in extending its SA-2 missile system to cover other areas of Laos as well. On 11 February 1970, the existence of a SAM threat 13.5 NM into BARREL ROLL along Route 7 was confirmed. Subsequently, three other sites were discovered along Route 7, one of which extended the threat 20 miles into Laos. New sites in NVN, east of the border, had been made operational, and from then on, the 7AF/13AF DO said, "The gunships would have to be more cautious."^{7/}

It was not the gunships, however, at whom the NVA missile crews fired the first SAMs in the BARREL ROLL area. On 27 February at 2330Z, four missiles were launched at an F-105 force of 15 aircraft striking a target 7.5 NM from the NVN Border, probably originating from Site 381 near Muong Sen, a village in North Vietnam along Route 7. Adequate launch warning had been received, and only one missile seemed to be tracking accurately. After evasive maneuvers were accomplished, one SAM exploded 200 feet from the nearest aircraft at 13,000 feet MSL, while the others detonated at 15,000 and 20,000 feet.^{8/}

By the end of March, with the existence of three 57-mm AA guns confirmed along Route 7 between Ban Ban and the border and a new SAM site apparently operational just inside Laos,^{9/} northern BARREL ROLL was rapidly becoming a much higher threat area than ever before.

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Even with the increased threat, overall losses remained low, but the number of hits and aircraft lost started the annual climb. Along Route 7, for instance, a two-week period in December saw 20 AAA reactions for 388th TFW aircraft, ^{10/} while the 432d TRW lost two aircraft in October and another two in November, their first losses since the previous June. Battle damage, too, was up, with the 432d TRW experiencing a total of 34 hits in October and November, compared to 28 in the previous four months combined. ^{11/} From 1 November 1969 to the end of March 1970, 20 U.S. aircraft were lost in BARREL ROLL.

Clearly, tactics would have to emphasize AAA suppression, and while F-105 IRON HAND aircraft were trolling daily in BARREL ROLL in case the SAMs came again, other strikes were directed specifically against AAA sites, resulting in 106 AAA/AW sites destroyed or silenced from 1 November 1969 to 24 March 1970. There was no doubt, however, that as in previous years, the dry season AAA threat would continue to increase.

SOURCE: (S) Research Data, Hq 7AF Files, Dec 69-Feb 70.

APPENDIX I

SORTIES vs SORTIES REPORT FIRING - 1969-1970

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	NOV				DEC				JAN				FEB				MAR				
REACT %	3.8	6.7	6.3	4.6	7.6	12.4	7.4	7.1	9.7	4.8	10.2	2.3	6.6	5.8	4.7	8.2	7.9	7.3	9.2	7.3	4.9
HIT	0	4	1	1	0	3	2	1	2	0	3	0	1	1	1	2	3	1	1	3	2
LOST	1	1	1	2	0	2	0	1	1	0	1	1	1	0	1	1	1	0	1	3	1

SORTIES FLOWN ————

INCLUDES USAF, USN, USMC

SORTIES RPT'G FIRINGS -----

INCLUDES SMALL ARMS FIRE

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APPENDIX II

WEATHER CONDITIONS IN OPERATION ABOUT FACE AREA

Normally Tactical Air Operations must operate under adverse weather conditions in the Operation ABOUT FACE area. From 1 November 1969 to 31 March 1970, for only 41 percent of the days were ceilings greater than 5,000 feet and visibility in excess of five miles.

The most unfavorable month was March 1970, when a dense haze obscured visibility. This haze was caused by the Lao farming practice of burning old rice crops.

The most unfavorable time of day was the period from 0400 hours to 1000 hours, which was workable only 30 percent of the time. The best period was 1000 hours to 1600 hours, when the ground fog lifted and was workable 54 percent of the time.

For the month prior to the enemy's ground offensive which captured the Plain of Jars, 44 percent of the days were workable. From 10 20 February 1970, there were 8 days in which the weather was workable.

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WEATHER CONDITIONS
in
OPERATION ABOUT FACE
(CEILINGS GREATER THAN 5,000 FEET -
VISIBILITY IN EXCESS OF 5 MILES)

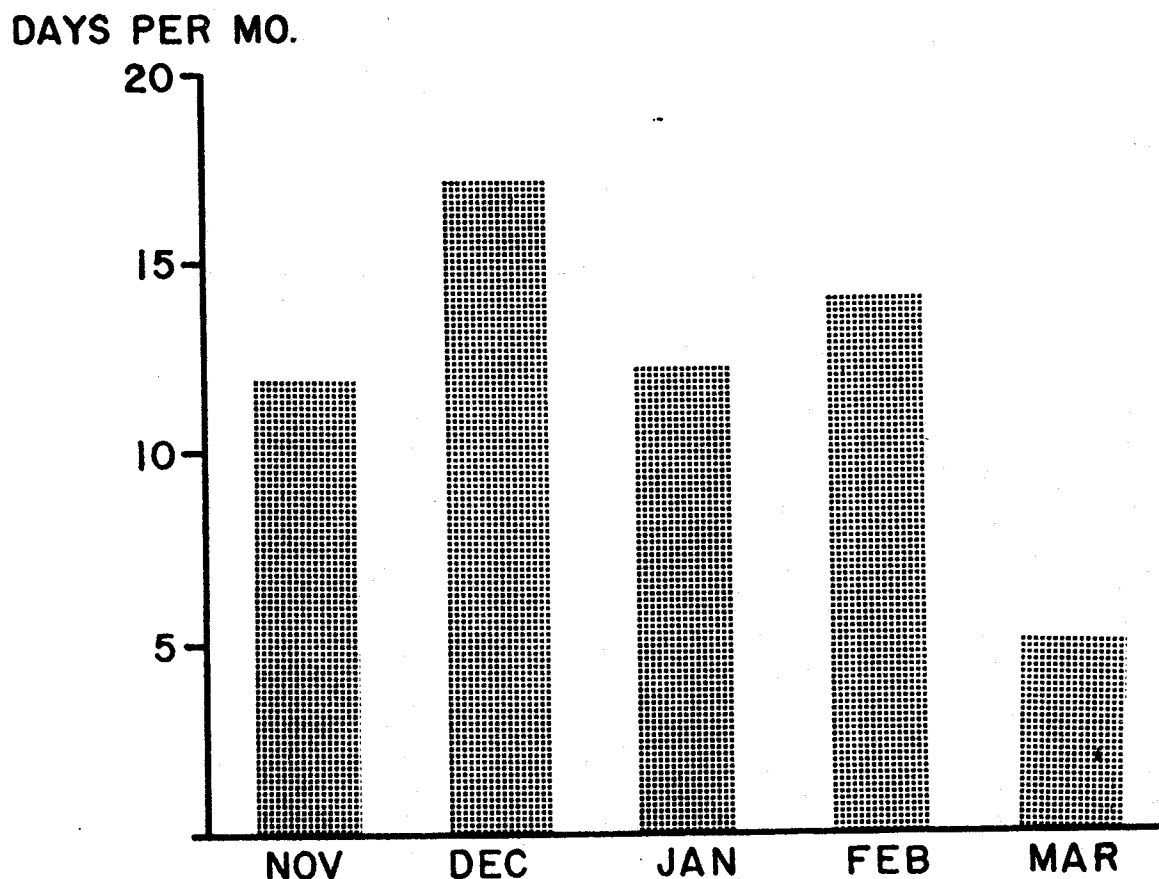


FIGURE 1

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APPENDIX III
RLAF COMBAT SORTIES

<u>Date</u>	<u>Sorties</u>
<u>1969</u>	
30 Oct - 5 Nov	433
6-12 Nov	587
13-19 Nov	572
20-26 Nov	522
27 Nov - 3 Dec	592
4-10 Dec	473
11-17 Dec	379
18-24 Dec	544
25-31 Dec	527
<u>1970</u>	
1-7 Jan	361
8-14 Jan	561
15-21 Jan	537
22-28 Jan	600
29 Jan-4 Feb	616
5-11 Feb	677
12-17 Feb	920
18-25 Feb	660
26 Feb-4 Mar	478
5-11 Mar	601
12-18 Mar	361

SOURCE: JANAF Summaries

BARREL ROLL STRIKE SORTIES

	<u>Nov</u>		<u>Dec</u>		<u>Jan</u>		<u>Feb</u>		<u>Mar</u>	
	<u>Scheduled Flown</u>		<u>Scheduled Flown</u>		<u>Scheduled Flown</u>		<u>Scheduled Flown</u>		<u>Scheduled Flown</u>	
1	179	126	122	115	133	131	134	131	159	139
2	169	60	134	97	138	99	134	133	147	145
3	164	55	130	98	134	108	143	124	151	144
4	133	59	130	113	123	121	137	114	129	91
5	145	96	132	88	123	76	134	92	119	93
6	144	113	135	89	123	65	124	90	96	91
7	148	106	143	103	125	93	135	105	93	99
8	152	135	142	139	127	125	121	108	97	96
9	144	109	146	126	123	111	111	108	94	94
10	132	122	149	157	125	99	120	108	101	101
11	146	118	152	147	143	133	113	94	100	96
12	142	103	147	154	127	115	119	98	98	100
13	146	143	143	107	136	146	124	180	100	69
14	144	137	141	147	130	132	117	196	92	73
15	136	126	150	86	142	119	192	194	98	76
16	138	126	141	105	149	70	199	205	89	73
17	140	127	141	90	139	102	192	171	85	91
18	133	45	138	82	134	73	206	224	91	163
19	141	115	135	88	154	105	190	194	199	163
20	139	111	137	116	146	116	196	196	195	90
21	131	137	128	106	146	129	193	181	193	117
22	132	85	120	121	139	136	183	184	188	131
23	133	95	119	117	131	129	193	181	192	144
24	139	113	122	120	126	122	184	160	196	147
25	134	112	141	134	127	126	199	192	196	172
26	133	124	145	132	140	140	171	170	196	150
27	139	143	137	129	135	131	177	154	198	168
28	131	132	137	95	131	114	176	162	190	164
29	132	131	137	132	131	123			188	184
30	129	123	138	99	139	132			186	182
31			135	122	137	135			180	174
TOTAL	4248	3327	4247	3557	4156	3556	4517	4268	4436	3820

SOURCE: 7AF/13AF (TACC)

TRUCK ATTRITION 1969 - 1970

BARREL ROLL				
	DESTROYED		DAMAGED	
	1969	1970	1969	1970
JAN	15	93	6	37
FEB	9	104	9	74
MAR	10	116	1	73
APR	25		12	
MAY	52		30	
JUN	110		50	
JUL	97		34	
AUG	14		7	
SEP	93		44	
OCT	95		98	
NOV	67		41	
DEC	126		79	
TOTAL	690	313	414	184
BARREL ROLL				
TOTALS AS OF 1 APR 70	DESTROYED (JAN - MAR)		DAMAGED (JAN - MAR)	
	1969	1970	1969	1970
	34	313	16	184

BARREL ROLL·BDA·INOV-24MAR

OPREP WEEK	D/D STR/BNK	AAA/AWP D/D	TRK D/D	K B A	SEC F/E
29Oct - 4 Nov	309	1	12	525	140
5 - 11 Nov	371	2	20	245	180
12-18 Nov	387	1	50	409	490
19-25 Nov	355	4	7	122	210
26 Nov-2 Dec	301	1	32	60	240
3 - 9 Dec	241	1	60	40	180
10-16 Dec	234	20	43	91	249
17-23 Dec	199	13	16	455	188
24-30Dec	160	14	57	238	145
31Dec-6 Jan	215	5	25	129	375
7-13 Jan	229	3	26	52	495
14-20 Jan	178	2	20	33	58
21-27 Jan	208	8	52	145	292
28 Jan-3 Feb	195	3	27	55	270
4 - 10 Feb	287	4	17	10	235
11-17 Feb	218	9	48	311	295
18-24 Feb	210	6	81	5	11004
25Feb-3 Mar	178	3	65	18	663
4-10 Mar	74	5	55	130	505
11-17 Mar	38	1	50	40	374
18-24 Mar	54	0	23	0	136

APPENDIX V

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APPENDIX VI
THE ROYAL LAO AIR FORCE

Some progress was made during this period to improve the Royal Lao Air Force (RLAF) by tightening up its traditionally relaxed organization. Between November 1969 and January 1970, the RLAF personnel rolls increased from 1,500 to 1,600 men, who supported and flew the 65 T-28s, 8 AC-47s, 14 H-34s and 33 utility planes comprising its fleet. Increases were planned in several areas of RLAF operations. It was proposed that the size of the pilot training class

[REDACTED] ~~CONFIDENTIAL~~

There still remained a problem with sortie allocation. Although the most significant military activity was occurring in MR II, most of the T-28 sorties continued to be flown in the other four Military Regions. Local factionalism and rivalry among the five independent region commanders were partly to blame. Space was also a problem. According to AIRA, "We just can't operate more than 16 T-28s out of Long Tieng." Also, once the T-28s began to stage out of Muong Soui in January, the B team (Thais) would not go up there. An attache mentioned a possible reason:

"The B team will fly north but their commander won't let them stage out of Muong Soui, even though some of them say they would. Perhaps there are bad memories of the last time the Thais were there."

On paper, in principle, the RLAF was transitioning into a much more effective fighting force, but in practice the apparent gains were being offset by increasingly demonstrable deficiencies. Traditional Lao military practices and procedures, able to be overlooked in a small de facto Air Force, began to assume alarming proportions as more equipment became available to the RLAF. The AC-47s provided a good example. In late January 1970, according to an Assistant Air Attache, even though the RLAF gunships had "come along a lot faster than we thought they would a few months ago," the reason might not entirely have been to support national interest:

"They're actually firing out on their missions, but it may be because of the value of the brass shell cases they can sell. Notice how much they get paid. It's not very much."

A bright spot appeared in January. USAF took a hard look at the

[REDACTED]

relationship between the training which the Lao airmen had received and jobs they were performing and discovered a serious imbalance. In many instances, U.S.-trained Laotians were either serving in fields alien to their training or simply had dropped out of sight, even though their commanders were still collecting their pay. AIRA proposed a sweeping reform in both the training program and the RLAF manning situation. In the area of crew training, they suggested that T-28 pilots stop checking out in C-47s.^{11/} They also proposed that the number of T-28 pilot trainees be determined by the number of available T-28s, at a 5:1 ratio.

^{12/}
With regard to non-aircrew training, the following was recommended:

- . A one-year moratorium on third country and CONUS training.
- . Pressure RLAF to place personnel in slots for which they trained.
- . Tell RLAF that until the UMD positions were filled there would be no further training.
- . Make RLAF aware that there will be no further "grave train" TDYs to CONUS or Thailand; once a man is trained he is expected to perform in his specialty.

To assist in this reform, AIRA drew up a Unit Manning Document (UMD), the first for the RLAF. It called for five squadrons and approximately 3,000 men--629 officers and 2,213 enlisted men.

On 16 February 1970, the proposal was submitted to Colonel Xeuam, RLAF Chief of Staff, and three days later it was approved, with some modification. The RLAF asked to retain only 7 of the 106 names submitted to be cut from the school list for FY 70 and 71. The other 99 were reassigned to slots in the UMD

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USAF did not press the issue of the moratorium. There were 250 new vacancies created, and English language training became a requirement to fill them. At the same time, a four-man RLAF team took the new UMD to all its bases to have it filled by the commanders. The acceptance of this proposal by RLAF was a promising step toward a better organized air force.

SOURCE: (S) Research Data, Hq 7AF Files, Dec 69-Feb 70.

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RLAF PAY SCALE

The pay scale for the RLAF has many variable factors and is extremely complicated in nature. The RLAF maintains many thick volumes to regulate pay, all of which were published in 1964. The cost of living in Laos in the last five years has degraded the RLAF wage point where it is a constant source of complaint. A condensation of the monthly pay rates is as follows:

	<u>RANK</u>	<u>KIP</u>	<u>EQUIV. U.S.</u>
	A/B	2,500	\$ 5.00
(up to)	S/Sgt (less than 5 yrs)	3,400	6.80
	S/Sgt (more than 5 yrs)	3,581	7.16
	S/Sgt (more than 9 yrs)	4,058	8.11
	S/Sgt (more than 12 yrs)	4,417	8.83
	S/Sgt (more than 20 yrs)	5,252	10.50
	W/O (less than 5 yrs)	4,536	9.07
	W/O (more than 20 yrs)	7,162	14.32
	2/Lt	6,565	13.13
	1/Lt (less than 5 yrs)	7,282	14.56
	1/Lt (over 5 yrs)	8,117	16.25
	1/Lt (over 7 yrs)	8,953	17.90
	Capt (less than 4 yrs)	9,072	18.14
	Capt (over 9 yrs)	10,027	20.05
	Capt (over 12 yrs)	10,744	21.49
	Maj (less than 3 in grade)	10,744	21.49
	Maj (more than 3 + 15 yrs service)	11,699	23.39
	Maj (more than 6)	12,893	25.78
	Lt Col (less than 3 in grade)	13,370	26.74
	Lt Col (more than 3 yrs in grade)	15,041	30.08
	Col (less than 3 in grade)	16,235	32.47
	Col (more than 3 in grade)	17,907	35.81
	Col (more than 6 in grade)	19,100	38.20
	B/Gen (less than 2 in grade)	20,055	40.11
	B/Gen (over 2 in grade)	21,727	43.45
	M/Gen (less than 3 in grade)	23,398	46.79
	M/Gen (over 3 in grade)	25,069	50.13

Six percent of each monthly base pay is deducted for the retirement fund.

FIGURE 1

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(FIGURE 1 Cont'd.)

In addition, pilots receive flying pay as follows:

T-28 pilots - 15,000 KIP/Month	\$ 30.00
All others - 13,000 KIP/Month	\$ 26.00

Family allowances are as follows:

Enlisted Men:

Married w/no children	(\$0.60)
w/1 thru 6 children 500 KIP per child	(\$1.00)
w/1 thru 6 children (and over 20 yrs service) 1,000 KIP per child	(\$2.00)

Officers and W/Os:

Married w/no children	420 KIP	(\$0.84)
Married w/1 child	1,000 KIP	(\$2.00)
Married w/1 child (over 5 yrs service)	1,600 KIP	(\$3.20)
Married w/2 children (over 5 yrs service)	2,400 KIP	(\$4.80)
Married w/3 thru 12 children	1,500 KIP	(\$3.00 ea.)
	Per child	

GLOSSARY

AAA	Antiaircraft Artillery
ABCCC	Airborne Battlefield Command and Control Center
ADC	Auto-Defense De Cho
AIRA	Air Attache
AMTI	Airborne Moving Target Indicator
APC	Armored Personnel Carrier
ARMA	Army Attache
ASAP	As Soon As Possible
AW	Automatic Weapons
BDA	Bomb Damage Assessment
CEP	Circular Error Probable
CIA	Central Intelligence Agency
COC	Combined Operations Center
CINCFAR	Commander-in-Chief, Forces Armee Royale
CN	COMMANDO NAIL
COMUSMACV	Commander, U.S. Military Assistance Command, Vietnam
CONUS	Continental United States
D/D	Damaged/Destroyed
FAC	Forward Air Controller
FAG	Forward Air Guide
FAN	Forces Armee Neutre
FAR	Forces Armee Royale
FOL	Forward Operating Location
IDP	Interdiction Point
IFR	Instrument Flight Rules
IR	Infrared
JCS	Joint Chiefs of Staff
JOC	Joint Operations Center
LOC	Line of Communications
LORAN	Long-Range Navigation
MR	Military Region
MSL	Mean Sea Level
NOD	Night Observation Device
NVA/PL	North Vietnamese Army/Pathet Lao
NVN	North Vietnam; North Vietnamese

UNCLASSIFIED

PAT	Perishable Area Target
PDJ	Plain of Jars; Plaine des Jarres
PL	Pathet Lao
POL	Petroleum, Oil, and Lubricants
Recon	Reconnaissance
RLAF	Royal Lao Air Force
RNO	Results-Not-Observed
RLG	Royal Laotian Government
RTAFB	Royal Thai Air Force Base
RVN	Republic of Vietnam
SGU	Special Guerrilla Unit
SOA	Special Operating Area
SOS	Special Operations Squadron
SOW	Special Operations Wing
STOL	Short Takeoff and Landing
TACAN	Tactical Air Navigation
TDY	Temporary Duty
TFS	Tactical Fighter Squadron
TIC	Troops-in-Contact
TOT	Time Over Target
TRW	Tactical Reconnaissance Wing
UMD	Unit Manning Document
USAID	United States Agency for International Development
VFR	Visual Flight Rules
VR	Visual Reconnaissance